impact

LESSON PLANNER

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Student's Book Walkthrough

Impact, *a new five-level series from National Geographic Learning, helps teenage learners to better understand themselves, each other and the world they live in.* Impact *features real-world content, stunning photographs and video from authentic sources, and inspiring stories from National Geographic Explorers, challenging teenagers not only to understand their world but also to engage with it. By encouraging self-expression, global citizenship and active participation,* Impact *motivates students to explore who they are and who they want to be – all while learning English.*

The Unit Opener uses **high-interest photographs** to engage students, present the unit theme and provide opportunities for discussion.

Each unit highlights one **National Geographic Explorer** to inspire future global citizens and promote 21st-century skills and values. Students first meet the unit explorer with a quote connected to the unit theme.

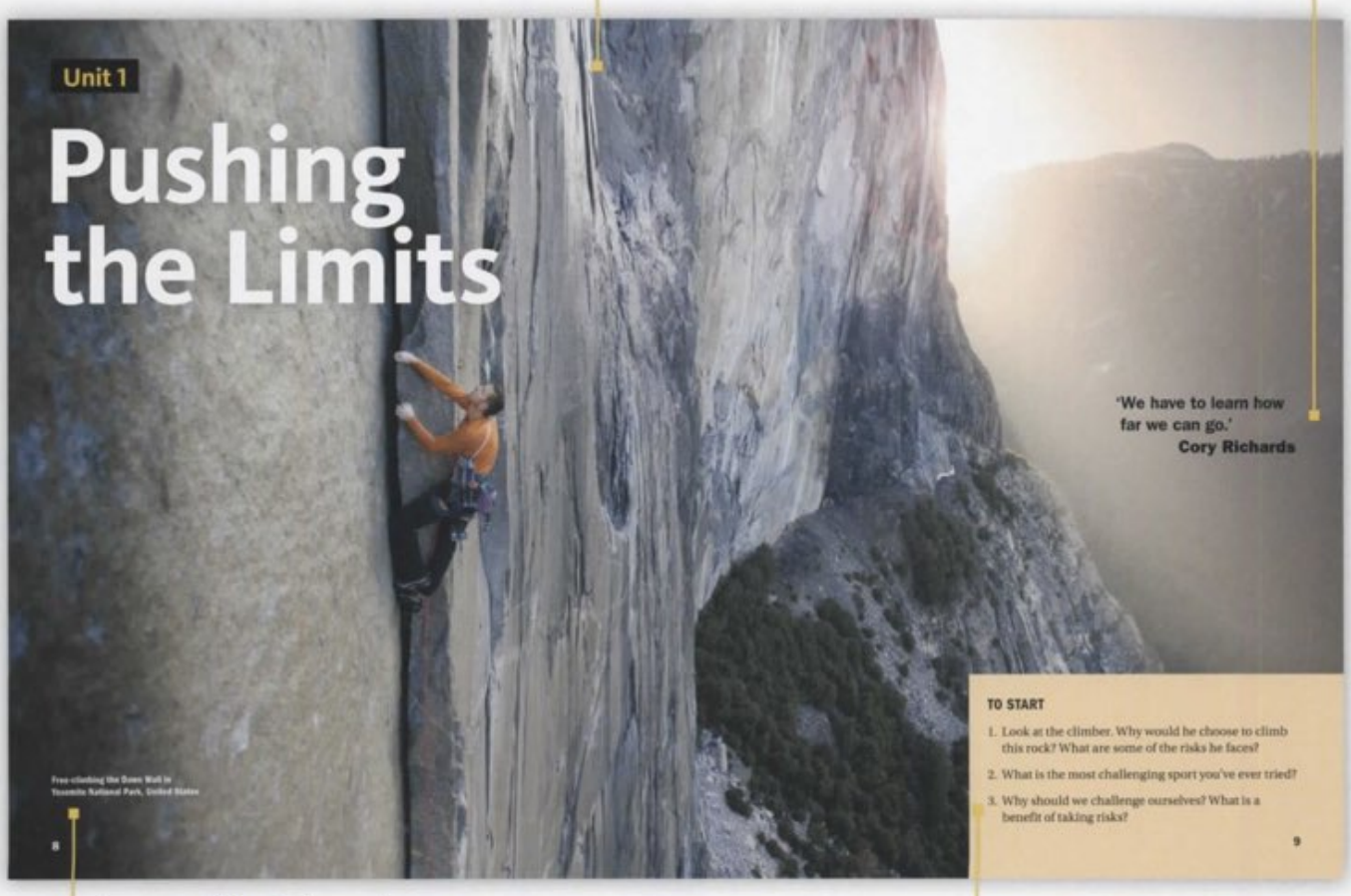
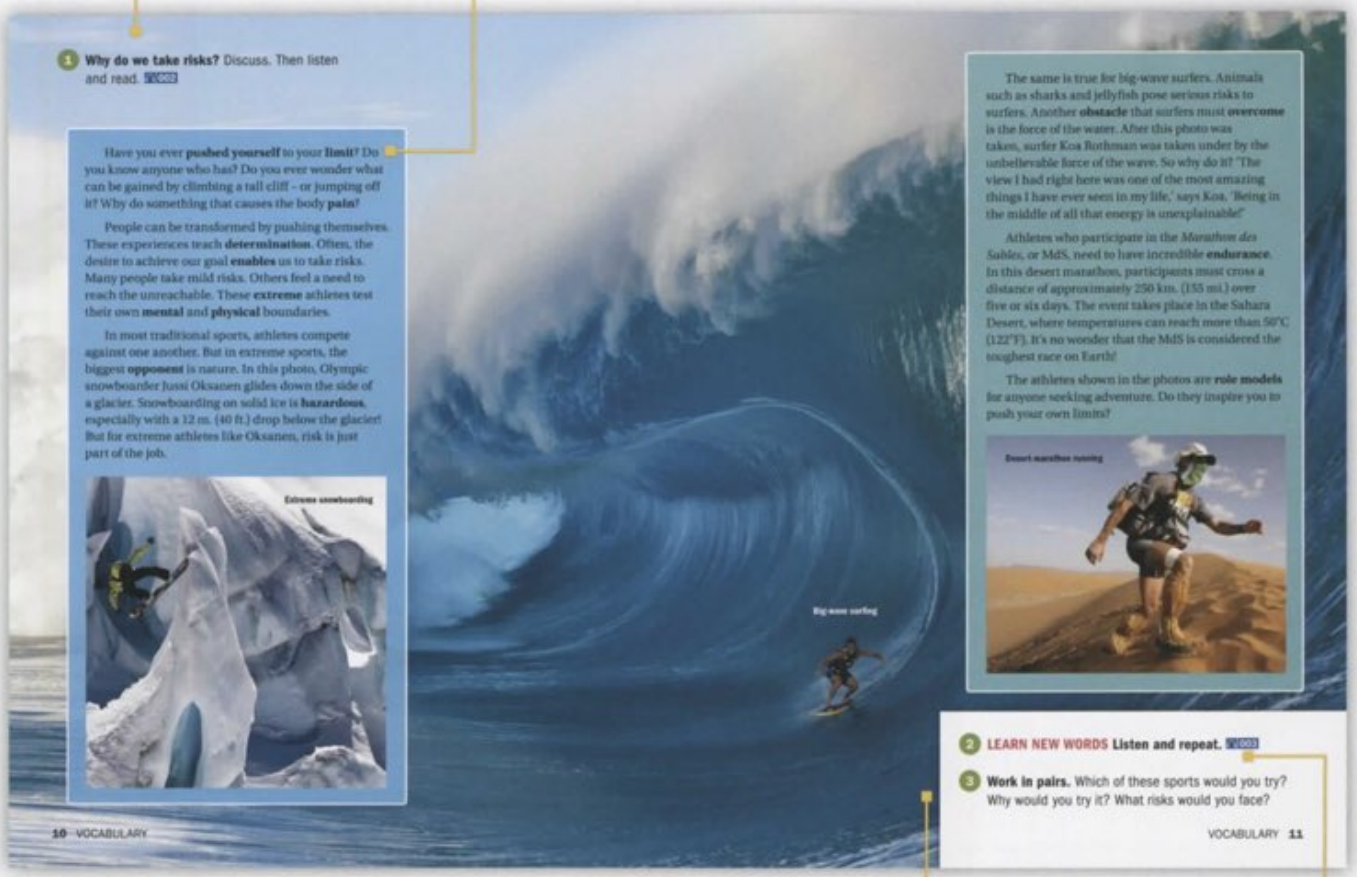


Image **captions** help students understand the image and make connections with the unit theme.

Discussion questions activate prior knowledge and lead students into the unit.

A **guiding question** promotes critical thinking, helps students access prior knowledge and introduces the context of the main vocabulary presentation.

Target vocabulary is presented in meaningful contexts to help students build fluency and confidence to discuss relevant real-world topics.



1 **Why do we take risks?** Discuss. Then listen and read. VOCAB

Have you ever **pushed yourself** to your **limit**? Do you know anyone who has? Do you ever wonder what can be gained by climbing a tall cliff – or jumping off it? Why do something that causes the body **pain**?

People can be transformed by pushing themselves. These experiences teach **determination**. Often, the desire to achieve our goal **enables** us to take risks. Many people take mild risks. Others feel a need to reach the unreachable. These **extreme** athletes test their own **mental** and **physical** boundaries.

In most traditional sports, athletes compete against one another. But in extreme sports, the biggest **opponent** is nature. In this photo, Olympic snowboarder Jussi Oksanen glides down the side of a glacier. Snowboarding on solid ice is **hazardous**, especially with a 12 m. (40 ft.) drop below the glacier! But for extreme athletes like Oksanen, risk is just part of the job.

Extreme snowboarding

Big-wave surfing

The same is true for big-wave surfers. Animals such as sharks and jellyfish pose serious risks to surfers. Another **obstacle** that surfers must **overcome** is the force of the water. After this photo was taken, surfer Koa Rothman was taken under by the unbelievable force of the wave. So why do it? "The view I had right here was one of the most amazing things I have ever seen in my life," says Koa. "Being in the middle of all that energy is unexplainable!"

Athletes who participate in the *Marathon des Sables*, or MdS, need to have incredible **endurance**. In this desert marathon, participants must cross a distance of approximately 250 km. (155 mi.) over five or six days. The event takes place in the Sahara Desert, where temperatures can reach more than 50°C (122°F). It's no wonder that the MdS is considered the toughest race on Earth!

The athletes shown in the photos are **role models** for anyone seeking adventure. Do they inspire you to push your own limits?

Desert marathon running

2 **LEARN NEW WORDS Listen and repeat.** VOCAB

3 **Work in pairs.** Which of these sports would you try? Why would you try it? What risks would you face?

10 VOCABULARY

VOCABULARY 11

Students **work in pairs or groups** to practise the new words.

All target vocabulary is presented on the **audio** in isolation, in a contextualised sentence, as well as in the context of the main presentation.

Student's Book Walkthrough

New vocabulary is practised in **meaningful contexts** involving National Geographic Explorers and real-world topics.

Students learn **new target vocabulary** and a **vocabulary strategy** that gives students tools to learn new words on their own.

The **Speaking Strategy** page presents phrases and model dialogues that help students express themselves fluently.

4 Read and write the words from the list. Make any necessary changes.

determination	hazardous	mental	obstacle	opponent
overcome	pain	physical	push himself	role model

Photographer and adventurer Cory Richards is used to difficult conditions. Cory has _____ many difficult _____ to bring us some incredible outdoor action photography. Cory believes that pushing his _____ and _____ limits helps him to better connect with himself and with the world.

In 2011, Cory successfully climbed an 8,000 m. (26,000 ft.) peak in the middle of winter. However, due to the _____ conditions, this challenge nearly cost him his life. On the way down, Cory and his team were caught in a major avalanche. 'Once the avalanche took us, there was no more fear,' says Cory. Although this experience scared him, he still takes risks to get a great photo. Cory's _____ and endurance make him a great _____.

5 LEARN NEW WORDS Listen to the words and match them to the definitions. Then listen and repeat. 1.084-1085

achieve boundary unbelievable unreachable

_____ 1. incredible
_____ 2. limit
_____ 3. gain through hard work or effort
_____ 4. impossible



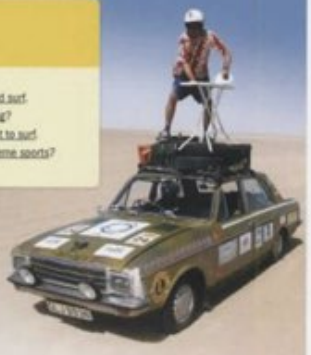
6 YOU DECIDE Choose an activity. Work in pairs.

1. Talk about characteristics that adventurers like Cory need to have. Which of these characteristics do you have? Which would you like to have?
2. Role-play an interview between a TV reporter and an extreme athlete who has just completed a new challenge.
3. Invent an extreme sport. Work together to make a poster describing a competition for this sport.

SPEAKING STRATEGY 1.086

Showing interest in a conversation

Statement	Responses
I love surfing.	Wow! What's that like? Really! I never knew that you could surf. What can you tell me about surfing? Tell me more about how you learnt to surf. What about you? Do you like extreme sports? You're a surfer? Me, too!



1 Listen. How do these speakers show interest in the conversation? Write the phrases you hear. 1.087

2 Read and complete the dialogue.

Lee: What are you doing, Jon?
Jon: I'm getting ready for my next mountain bike race.
Lee: Really! _____ you raced.
Jon: Yeah, I've been racing for about three years.
Lee: _____
Jon: It's very cool. _____ Do you do any extreme sports?
Lee: Yeah, I like rock climbing. And I'm getting ready for my first extreme ironing competition.
Jon: _____ what it's like to do extreme ironing.
Lee: I can't yet – I've never done it!



3 Work in pairs. Throw the cube. Make a statement about the topic on the cube. Your partner uses the phrases above to maintain the conversation. Then swap roles.

Go to page 153.

4 Work in groups. Do you take risks? Share stories about risks you have taken. Tell one true story and one false story. See if your group can guess the true story. Use the phrases above to maintain the conversations.

You Decide activities allow students to make decisions and become active participants in learning. They're encouraged to think critically and creatively as they discover who they are and who they want to be.

Games provide a fun context for communication.

Grammar boxes include natural examples of real-world language. Expanded grammar boxes with explanations are provided in the Workbook and on the Classroom Presentation Tool.

Additional target vocabulary is presented in meaningful contexts and applied in the grammar practice.

GRAMMAR 2.09

Embedded clauses, questions and commands

I think ... Extreme sports are dangerous.	**I think extreme sports are** dangerous.
I wonder ... What obstacles has Cory overcome?	**I wonder what obstacles Cory has overcome.**
Do you know ... Can we climb that mountain in winter?	**Do you know if we can climb** that mountain in winter?
I'm asking you ... Try downhill mountain biking.	**I'm asking you to try** downhill mountain biking.

1 Work independently. Listen to the speakers. Then complete the embedded clause, question or command. Remember to change the order of words when necessary. 2.09

1. She's guessing _____
2. He's wondering _____
3. You're telling me _____
4. I think _____
5. I'm asking you _____

2 Work in pairs. Make sentences to form embedded clauses, questions and commands.

I wonder	Wear a helmet when you ride your bike.
I think	Had Cory been in an avalanche before?
I'm asking	Teach your brother how to surf.
I'm telling	How many countries has Cory visited?
Do you remember if	You could try ice climbing.

1. _____
2. _____
3. _____
4. _____
5. _____



3 LEARN NEW WORDS You've learnt about physical challenges. Now listen and read about a mental challenge. Then listen and repeat. 2.10 2.11

A **non-traditional** sport, such as ice climbing, can really push us to our physical limits. But have you ever done anything that pushes you to your mental limits? Around the world, students participate in tough academic competitions, such as Maths Olympiads. These **events** require a lot of training, just as an extreme sport does. The competitions often require students to **struggle** with complex problems. Sometimes it takes over an hour to complete just one!

Nur Muhammad Shaftullah knows first-hand how the Maths Olympiads can push mental limits. He is the youngest student ever to compete in the International Mathematical Olympiad. At 15, Nur Muhammad went to the international competition to **represent** his native country, Bangladesh. He competed against students from 125 countries and took the bronze medal! The next year he did it again. The year after that he earnt a silver medal. Nur Muhammad's maths skills are really unbelievable. What about you? Do you think the International Mathematical Olympiad is beyond your mental limits?



4 Work in pairs. Write sentences using the words below. Include an embedded clause, question or command in each sentence.

1. wonder / time / event I wonder if the event takes much time.
2. guessing / struggle / difficult _____
3. think / student / prepare _____
4. telling / non-traditional / sport _____
5. asking / represent / country _____

5 Work in groups. Think of other competitions that provide mental challenges. What do you know about them? What questions do you have? Discuss in your group, using embedded clauses, questions and commands as much as possible.

Grammar is practised in **context** with multiple opportunities for real communication using **all four language skills.**

Student's Book Walkthrough

New target vocabulary is presented in the reading and gives students an opportunity to make predictions about the reading topic.

Reading strategies promote comprehension and help students become independent readers.

Readings feature engaging, relevant topics covering a variety of **cross-curricular areas**.



1 BEFORE YOU READ **Discuss in pairs.** Look at the photos, caption and title. What do you think this reading is about?

2 LEARN NEW WORDS **Find these words in the reading.** What do you think they mean? Use a dictionary to check. Then listen and repeat. 012

beyond consequence in control limb peak performance

3 WHILE YOU READ **Pause after each paragraph to write what it's about in your own words.** 012

4 AFTER YOU READ **Work in small groups to answer the questions.**

1. How did Amy lose her legs?
2. What other negative consequences did Amy suffer from meningitis?
3. What happened the first time Amy tried to go snowboarding again?
4. What did Amy learn about limitations?
5. How does Amy work to help others?
6. If she could, would she go back to her former life? Why or why not?

Amy Purdy snowboarding

16 READING

No Limits

AMY PURDY SEES HER LIMITATIONS AS A GIFT THAT HAS HELPED HER DO AMAZING THINGS.

Amy Purdy is a world-class athlete, model and actress. She has achieved amazing success in her life and hasn't let anything slow her down – even the loss of both legs! In fact, some of Amy's greatest achievements came after she lost them.

When Amy was 15, she started snowboarding. After finishing high school, she moved to the mountains, where she could easily spend her free time snowboarding. She felt totally in control of her life. But then at 19, she contracted meningitis, a horrible disease that left her with only a two per cent chance of survival. Amy survived, but there were terrible consequences. She lost a kidney, the hearing in her left ear, and both legs below the knees.

For a long time Amy felt depressed. But when she closed her eyes, she could still see herself snowboarding. She decided not to let this situation take over her life. By the time she was 21, she was back on her board, wearing artificial legs she had built herself. The first time she tried to use them, she fell off, but her legs kept going down the hill without her! After a few years of hard training using her new legs, Amy was able to reach her peak performance level. She became the Para-Snowboarding World Champion in 2012, and she later won the bronze medal in the 2014 Paralympic Games.

Amy's new life was beyond what she expected. Suddenly, she had become a celebrity, a fashion model and an actress. She was even on the popular American TV programme *Dancing with the Stars*. Most importantly, she started helping people like her to do the sports they love. She started a company that makes artificial limbs, and she created an organisation that introduces people with physical disabilities to action sports.

Now, if you ask Amy, 'Would you want to change your situation?', she would say no. Losing her legs has enabled, not disabled, her. According to Amy, 'It's facing our fears head on that allows us to live our lives beyond our borders.'

5 **Work in pairs.** Re-read the text. Then without looking, take turns saying what you remember. Use your own words.

6 **Discuss in groups.**

1. How did getting meningitis impact Amy's life? Identify positive and negative impacts.
2. Do you agree that disadvantages can become advantages? Explain.
3. Do you think anyone can overcome an obstacle like Amy has? Why or why not? Give examples.

READING 17

Before reading activities help students make predictions about the reading.

While reading activities guide students and help them stay focused.

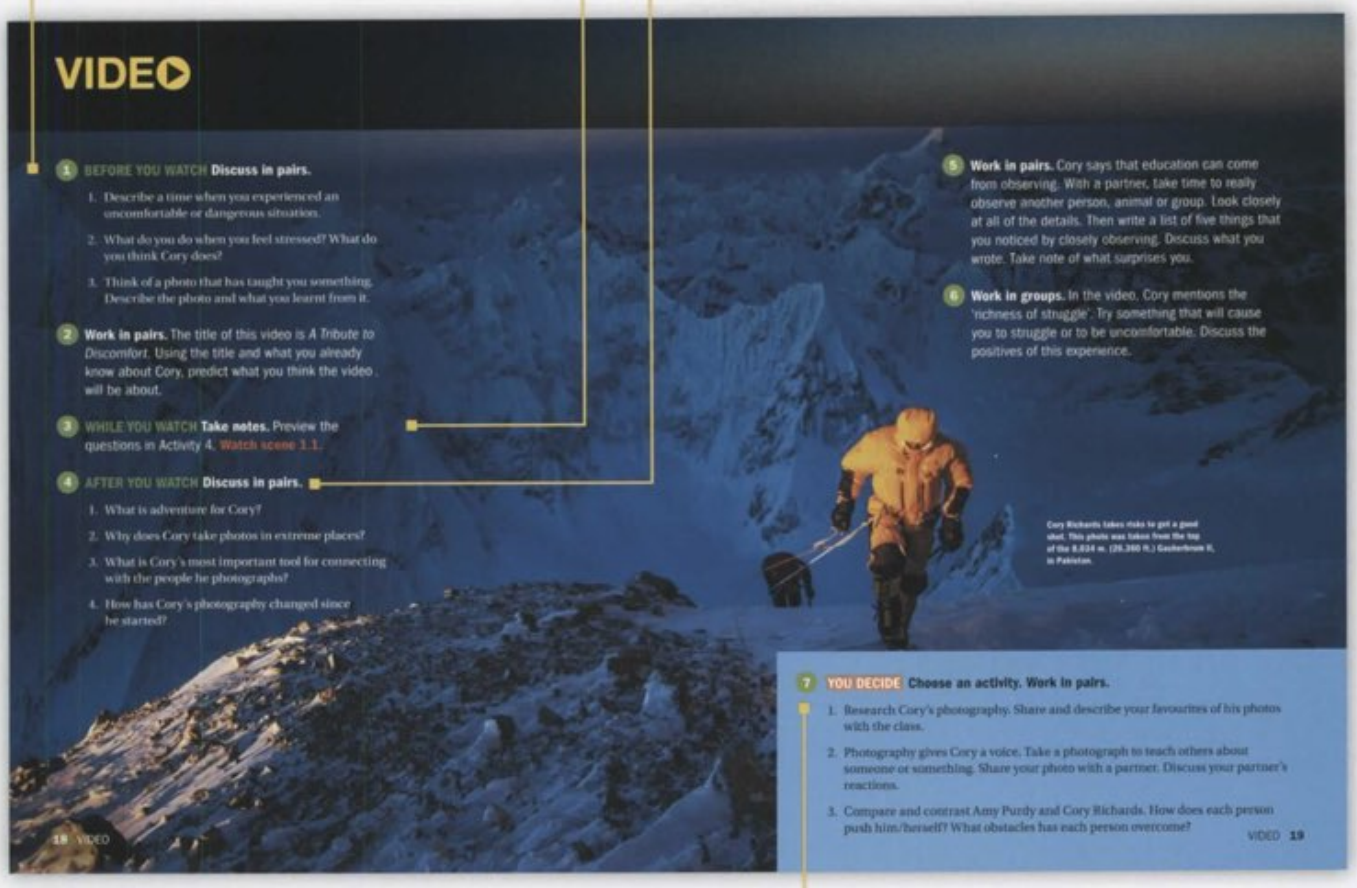
After reading activities provide students with opportunities to react and respond to the text, and to make connections between the reading and their lives.

Meaningful, relevant and timely topics are presented through videos from **National Geographic** and other sources, as well as animated **infographic videos** created specifically for this series.

Before watching activities help students make predictions about the video.

While watching activities guide students and help them stay focused.

After watching activities provide students with opportunities for discussion and reflection.



A **You Decide activity** supports learner autonomy and allows flexibility in the classroom by offering opportunities for individual, pair or group work.

Student's Book Walkthrough

Grammar boxes include natural examples of real-world language. Expanded grammar boxes with explanations are provided in the Workbook and on the Classroom Presentation Tool.

Students learn the basics of **academic writing** and are introduced to a variety of writing genres.

Models written at the student level provide examples for students to follow.

GRAMMAR A014

Adding emphasis

My sister loves hiking in the Himalayas.
The place (where) my sister loves hiking **is** the Himalayas.

I won't go surfing. I don't like swimming in the sea.
The reason (why) I won't go surfing **is that** I don't like swimming in the sea.

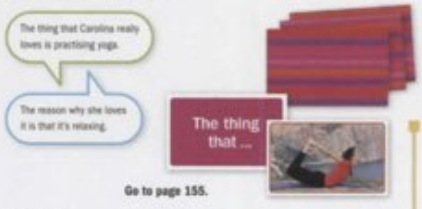
He loves yoga because it makes him feel relaxed.
The thing (that) he loves about yoga **is that** it makes him feel relaxed.

I like snow kiting. It pushes me to my physical limits.
What I like best about snow kiting **is that** it pushes me to my physical limits.

1 **Read.** Then rewrite the sentences to add emphasis.

1. I prefer snowboarding to skiing because I need less equipment.
   The reason why I prefer snowboarding is that I need less equipment.
2. José really enjoys climbing in the Andes.
   The place _____
3. I love the excitement of kite surfing.
   The thing _____
4. Maria likes trying extreme sports.
   The person _____
5. You should try *tae kwon do*. It really helps you focus.
   The reason _____

2 **Work in pairs.** Take turns choosing cards from each pile. Discuss the sport pictured on your card. Add emphasis.



Go to page 155.

WRITING

A biography tells the story of a person's life. Here are some useful words and phrases to connect ideas when writing a biography:

afterwards	**at first**	**eventually**
later on	**more recently**	**ultimately**

1 **Read the model.** Work in pairs to study the writing model. What words does the writer use to organise the biography? Underline them.

Yuko Arimori is an Olympic marathon runner. She was born in Japan in 1966. At first, Arimori had difficulty walking because of a problem with her legs. Other children made fun of her. Her gym teacher helped her to gain confidence, and Arimori learnt to try new things such as track running. Through hard work, she became one of the best high school runners in her city.

Eventually, Arimori tried to join a top track team in Japan. When a spot opened for a marathon runner, Arimori saw her chance. She had never been fast, but speed wasn't as important as endurance, which Arimori had. Ultimately, she became one of the best female marathon runners in the world. In 1992, at the age of 26, she participated in the Barcelona Olympics, where she won the silver medal. Afterwards, in the 1996 Olympics, Arimori won the bronze.



Later on, in 1998, Arimori decided to go beyond just running. She started Hearts of Gold, a volunteer organisation to help land mine victims in Cambodia. Hearts of Gold sponsors the Angkor Wat International Half Marathon. Runners from around the world compete to raise money to buy artificial limbs for those who lost arms and legs because of land mines. In fact, many of the victims join the race!

More recently, Arimori was a United Nations Goodwill Ambassador. Today, she's the President and CEO of Special Olympics Nippon. She continues to help people in Cambodia and other parts of the world.

2 **Work in pairs.** Identify four phases of Yuko's life.

3 **Write.** Write a biography of an athlete who is a role model for others. Use the words and phrases above to help you organise the biography.

Grammar is practised **in context** through engaging activities and **games**.

Step-by-step **pre-writing and drafting support** is provided in the Workbook.

Optional worksheets guide students through the five steps involved in **process writing**: pre-writing, drafting, revising, editing and publishing.

The **Mission** page features National Geographic Explorers as role models who embody the **21st-century skills and values** teenagers need to become successful global citizens.

A variety of **projects** build 21st-century skills through independent research, discussion and presentations using a variety of media.



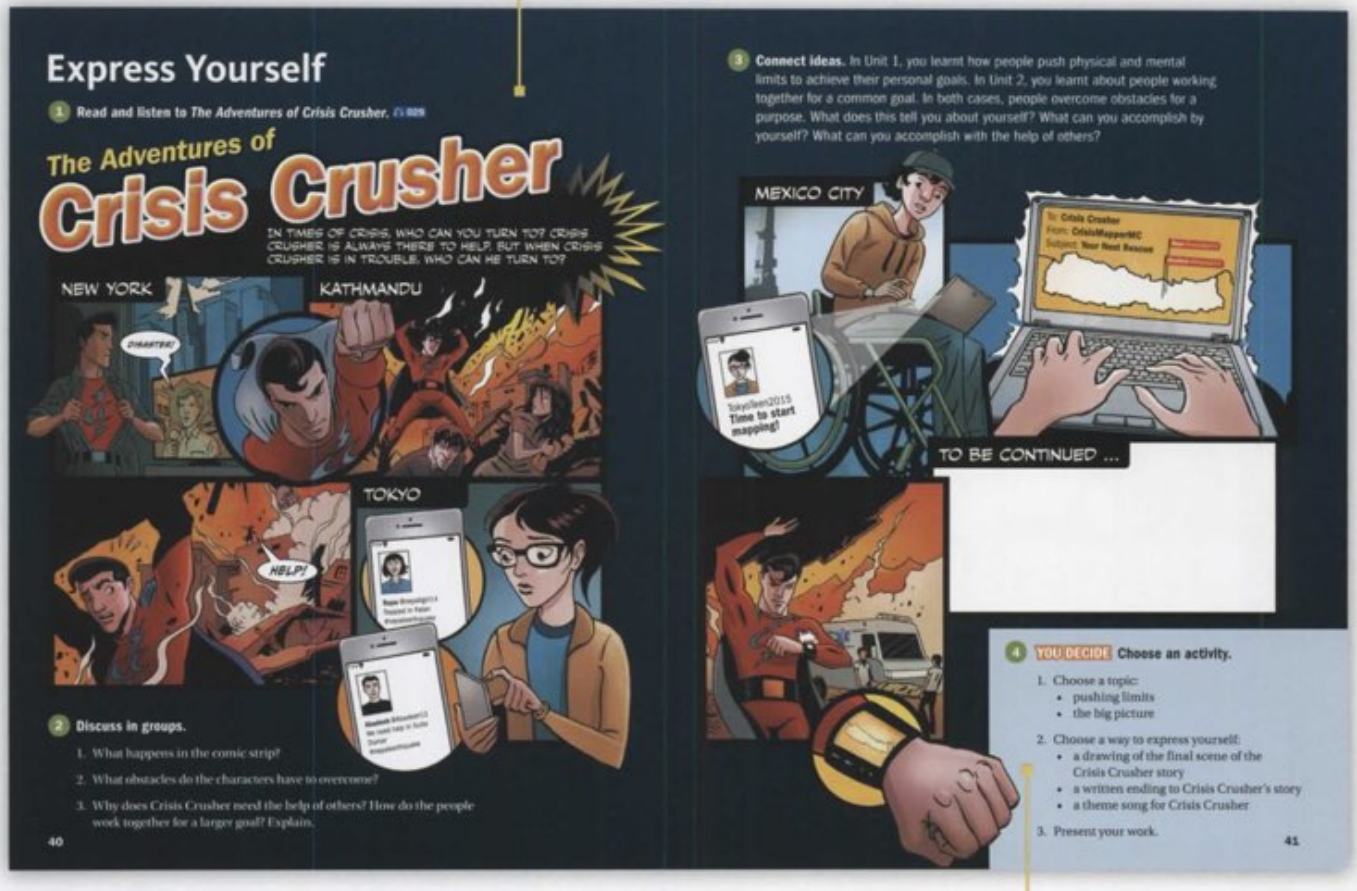
A **quote** by the Explorer and a **Meet the Explorer** video help students connect with these inspirational people who are making a difference in the world.

You Decide project choices allow students to take charge of their own learning and choose their preferred way to use the language they learnt to synthesise and reflect on the unit topic.

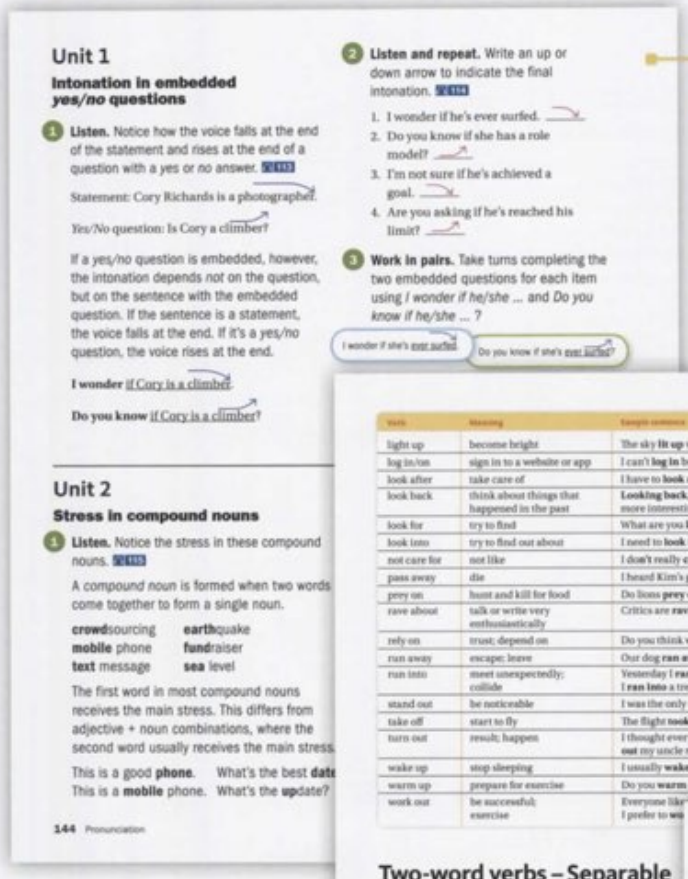
Student's Book Walkthrough

Express Yourself appears every two units. It actively engages students in discussions to synthesise what they learnt in the preceding units and make connections beyond the unit themes.

This section exposes students to a wide range of **creative expression**, from poems and film scripts, to presentations and personal narratives.



Students **choose** a form of creative expression to find their own voice and reflect on the themes they have studied.



Unit 1

Intonation in embedded *yes/no* questions

1 Listen. Notice how the voice falls at the end of the statement and rises at the end of a question with a *yes* or *no* answer. 2.1.1

Statement: Cory Richards is a photographer.

Yes/No question: Is Cory a climber?

If a yes/no question is embedded, however, the intonation depends *not* on the question, but on the sentence with the embedded question. If the sentence is a statement, the voice falls at the end. If it's a yes/no question, the voice rises at the end.

I wonder if Cory is a climber.

Do you know if Cory is a climber?

2 Listen and repeat. Write an up or down arrow to indicate the final intonation. 2.1.1

1. I wonder if he's ever surfed. ↘
2. Do you know if she has a role model? ↗
3. I'm not sure if he's achieved a goal. ↘
4. Are you asking if he's reached his limit? ↗

3 Work in pairs. Take turns completing the two embedded questions for each item using *I wonder if he/she ...* and *Do you know if he/she ...* ?

I wonder if she's ever surfed. Do you know if she's ever surfed?

Unit 2

Stress in compound nouns

1 Listen. Notice the stress in these compound nouns. 2.1.2

A *compound noun* is formed when two words come together to form a single noun.

crowdsourcing **earth**quake
mobile phone **fund**raiser
text message **sea** level

The first word in most compound nouns receives the main stress. This differs from adjective + noun combinations, where the second word usually receives the main stress.

This is a good **phone**. What's the best **date**
This is a **mobile** phone. What's the **up**date?

144 Pronunciation

Pronunciation activities provide practice with stress, intonation, reductions and connected speech to help students better understand speakers of English and be better understood.



Verb	Meaning	Example sentence
light up	become bright	The sky **lit up** with fireworks.
log in/on	sign in to a website or app	I can't **log in** because I can't remember my password.
look after	take care of	I have to **look after** my little sister on Sunday.
look back	think about things that happened in the past	**Looking back,** I think the other project topic was more interesting.
look for	try to find	What are you **looking for**? Did you lose something?
look into	try to find out about	I need to **look into** it. I'll let you know tomorrow.
not care for	not like	I don't really **care for** opera.
pass away	die	I heard Kim's grandma **passed away**.
prey on	hunt and kill for food	Do lions **prey on** zebras?
rave about	talk or write very enthusiastically	Critics are **raving about** the new film.
rely on	trust; depend on	Do you think we **rely on** technology too much?
run away	escape; leave	Our dog **ran away**!
run into	meet unexpectedly; collide	Yesterday I **ran into** my old teacher. I **ran into** a tree.
stand out	be noticeable	I was the only one wearing purple. I really **stood out**.
take off	start to fly	The flight **took off** on time.
turn out	result; happen	I thought everyone in my family had a mobile phone. It **turns out** my uncle refuses to get one!
wake up	stop sleeping	I usually **wake up** at six o'clock.
warm up	prepare for exercise	Do you **warm up** before football games?
work out	be successful; exercise	Everyone like I prefer to wo

Students have access to **reference** sections on irregular verbs, two- and three-word phrasal verbs, and verbs followed by an infinitive or gerund.

Two-word verbs – Separable

Verb	Meaning	Example sentence
back up	support	His friends ba
call off	cancel	They had plan
calm down	help relax	Let's play soft
carry out	do or complete something	They are carr
check out	observe; notice	**Check out** my
cheer up	try to make someone happy	Why don't we
clean up	organise; clean	Can you **clean**
cut down	make something fall to the ground	They're **cuttin**
cut off	remove by cutting	Did you read
draw in	capture the interest	This book rea
equip with	supply with	They **equippe**
fill out/in	write information in a form	Remember to **Fill in** your d

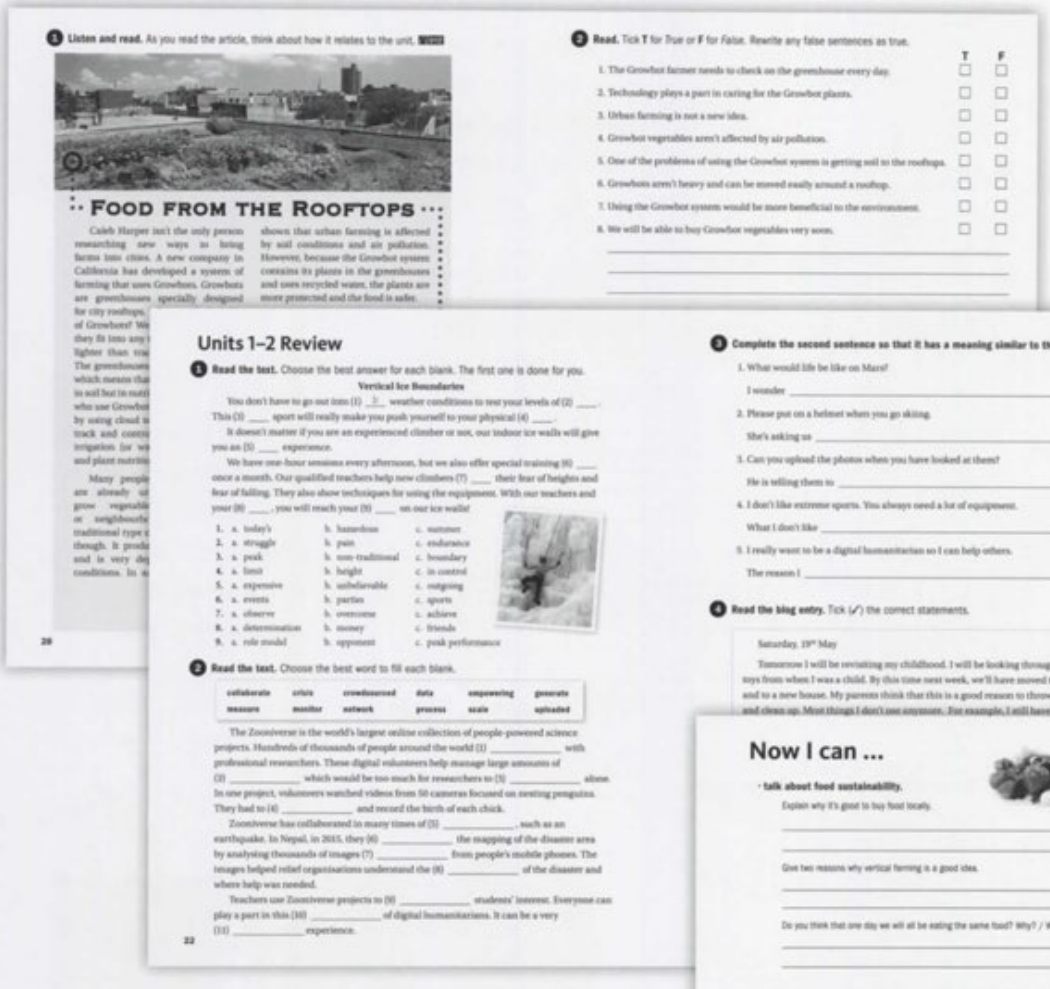
150



A variety of **games** allows students to practise concepts and develop fluency – all while having fun.

Workbook

The **Workbook** contains activities that reinforce and consolidate the material in the Student's Book and include listening, reading, writing, grammar and vocabulary practice.



1 Listen and read. As you read the article, think about how it relates to the unit. VIDEO

FOOD FROM THE ROOFTOPS

Caleb Harper isn't the only person researching new ways to bring farms into cities. A new company in California has developed a system of farming that uses Growbots. Growbots are greenhouses specially designed for city rooftops. [illegible] of Growbots! We [illegible] they fit into any [illegible] lighter than [illegible] The greenhouses [illegible] which means that [illegible] is soil but in nutri[illegible] who use Growbot[illegible] by using cloud t[illegible] track and contro[illegible] irrigation (or wa[illegible] and plant nutrie[illegible]

Many people [illegible] are already us[illegible] grow vegetable[illegible] or neighbourh[illegible] traditional type [illegible] though. It produ[illegible] and is very de[illegible] conditions. In a[illegible] shown that urban farming is affected by soil conditions and air pollution. However, because the Growbot system contains its plants in the greenhouses and uses recycled water, the plants are more protected and the food is safer.

20

2 Read. Tick **T** for *True* or **F** for *False*. Rewrite any false sentences as true.

	T	F
1. The Growbot farmer needs to check on the greenhouse every day.	☐	☐
2. Technology plays a part in caring for the Growbot plants.	☐	☐
3. Urban farming is not a new idea.	☐	☐
4. Growbot vegetables aren't affected by air pollution.	☐	☐
5. One of the problems of using the Growbot system is getting soil to the rooftops.	☐	☐
6. Growbots aren't heavy and can be moved easily around a rooftop.	☐	☐
7. Using the Growbot system would be more beneficial to the environment.	☐	☐
8. We will be able to buy Growbot vegetables very soon.	☐	☐

Units 1–2 Review

1 Read the text. Choose the best answer for each blank. The first one is done for you.

Vertical Ice Boundaries

You don't have to go out into (1) _b_ weather conditions to test your levels of (2) ____. This (3) ____ sport will really make you push yourself to your physical (4) ____.

It doesn't matter if you are an experienced climber or not, our indoor ice walls will give you an (5) ____ experience.

We have one-hour sessions every afternoon, but we also offer special training (6) ____ once a month. Our qualified teachers help new climbers (7) ____ their fear of heights and fear of falling. They also show techniques for using the equipment. With our teachers and your (8) ____, you will reach your (9) ____ on our ice walls!

1.	a. today's	b. hazardous	c. summer
2.	a. struggle	b. pain	c. endurance
3.	a. peak	b. non-traditional	c. boundary
4.	a. limit	b. height	c. in control
5.	a. expensive	b. unbelievable	c. outgoing
6.	a. events	b. parties	c. sports
7.	a. observe	b. overcome	c. achieve
8.	a. determination	b. money	c. friends
9.	a. role model	b. opponent	c. peak performance

2 Read the text. Choose the best word to fill each blank.

collaborate	crisis	crowdsourced	data	empowering	generate
measure	monitor	network	process	scale	uploaded

The Zooniverse is the world's largest online collection of people-powered science projects. Hundreds of thousands of people around the world (1) _____ with professional researchers. These digital volunteers help manage large amounts of (2) _____, which would be too much for researchers to (3) _____ alone. In one project, volunteers watched videos from 50 cameras focused on nesting penguins. They had to (4) _____ and record the birth of each chick.

Zooniverse has collaborated in many times of (5) _____, such as an earthquake. In Nepal, in 2015, they (6) _____ the mapping of the disaster area by analysing thousands of images (7) _____ from people's mobile phones. The images helped relief organisations understand the (8) _____ of the disaster and where help was needed.

Teachers use Zooniverse projects to (9) _____ students' interest. Everyone can play a part in this (10) _____ of digital humanitarians. It can be a very (11) _____ experience.

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3 Complete the second sentence so that it has a meaning similar to the first sentence.

1. What would life be like on Mars?
   I wonder _____.
2. Please put on a helmet when you go skiing.
   She's asking us _____.
3. Can you upload the photos when you have looked at them?
   He is telling them to _____.
4. I don't like extreme sports. You always need a lot of equipment.
   What I don't like _____.
5. I really want to be a digital humanitarian so I can help others.
   The reason I _____.

4 Read the blog entry. Tick (✓) the correct statements.

Saturday, 19th May

Tomorrow I will be revisiting my childhood. I will be looking through clothes and toys from when I was a child. By this time next week, we'll have moved to a new city and to a new house. My parents think that this is a good reason to throw things out and clean up. Most things I don't use anymore. For example, I still have my first pair

Now I can ...

- **talk about food sustainability.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Explain why it's good to buy food locally.

  _____

  _____

  Give two reasons why vertical farming is a good idea.

  _____

  _____

  Do you think that one day we will all be eating the same food? Why? / Why not?

  _____

  _____

- **use mixed conditionals to express how things would be different.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  If I _____ (read) the review,

  _____.

  If I _____ (eat) healthier food, _____.

- **use double comparatives to describe outcomes.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  The more local vegetables we buy, _____.

  The tastier the food, _____.

  The less I eat, the _____.

- **write a review of my favourite restaurant.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Write four or five sentences using the phrases from the box.

honestly	more importantly	obviously	(un)fortunately

  _____

  _____

  _____

  _____

YOU DECIDE **Choose an activity.** Go to page 92.

33

A **review** section every two units exposes students to question types commonly found in international exams.

Now I can is a brief self-assessment that offers students an opportunity to reflect on what they learnt and identify areas where they need additional practice.

Each unit ends with a **You Decide activity** that provides options for targeted skill practice.

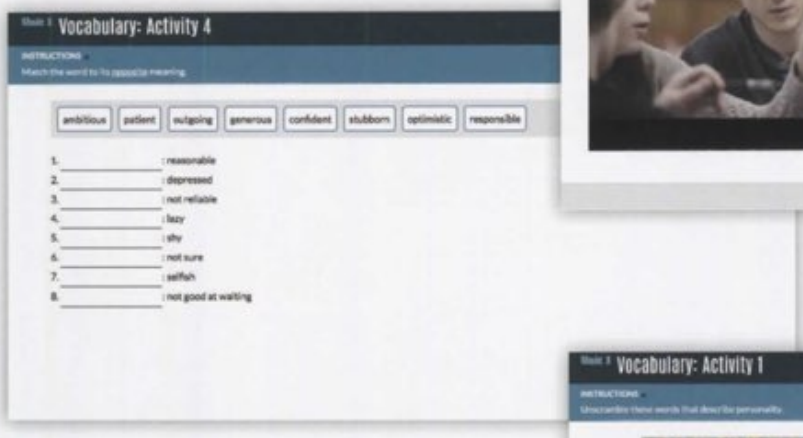
Workbook **audio** is available for streaming and download at **NGL.Cengage.com/impact4BR**.

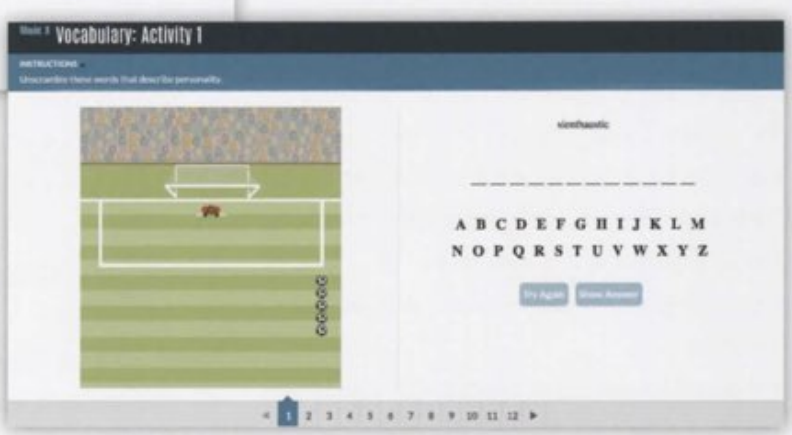
Online Workbook and Student's Website

The Online Workbook, hosted on MyELT, includes **interactive activities** to support each section from the Student's Book:

- Vocabulary
- Speaking Strategy
- Grammar
- Reading
- Video
- Writing







The Online Workbook also includes vocabulary **flashcards** and **grammar tutorials** for additional support.

Each unit ends with a **You Decide activity** that provides options for targeted skill practice. Specific activities are recommended based on the Now I can self-assessment.

Student resources, including audio for Student's Book and Workbook activities, are available at **NGL.Cengage.com/impact4BR**.

Teacher's Resources

The **Lesson Planner**, with DVD, Audio CD and Teacher's Resource CD-ROM, provides everything needed to successfully plan, teach and supplement lessons.



The Lesson Planner includes:

- a professional development section that introduces the key principles of the course;
- a detailed scope and sequence;
- step-by-step instructions for carrying out lessons;
- reduced Student's Book pages with answers at point of use;
- Student's Book audio scripts;
- extension activities to supplement the Student's Book, including instructions to use the worksheets on the Teacher's Resource CD-ROM;
- teaching tips and professional development support at point of use;
- suggestions for formative assessment.

The **Teacher's Resource CD-ROM** includes:

- unit-by-unit pacing guides for easy lesson planning;
- printable worksheets for extension activities and process writing support;
- printable graphic organisers;
- video scripts;
- Workbook audio scripts;
- pronunciation activities answer keys.

The *Impact* **DVD** and the **Audio CD** contain all of the multimedia to support the Student's Book.



The **Classroom Presentation Tool** integrates all of the *Impact* resources, including video, audio, Student's Book pages and interactive activities, making it easy to carry out lessons in any classroom with an interactive whiteboard or a computer and projector.



The **Assessment CD-ROM with *ExamView*®** includes activity banks to generate customised unit quizzes, mastery tests and final exams, as well as a pre-test and placement test.

The **Teacher's Resource Website** includes the Student's Book and Workbook audio, the Professional Development Video, as well as all the printable materials contained in the Teacher's Resource CD-ROM.
NGL.Cengage.com/impact4BR

Video

Main Video The main video in each unit introduces a key concept of the unit theme in a unique way, either through **live action National Geographic content** or through an original animation designed specifically for this course.





The videos cover meaningful, relevant and timely topics such as:

- Group behaviour
- Art in the open
- Forming teen identity
- Pushing your limits

Meet the Explorer When students reach the Mission page of each unit, they'll learn more about the National Geographic Explorer featured in the unit. A quote by the Explorer and a Meet the Explorer video help students connect with these inspirational people who are making a difference in the world. These **short one-minute clips** reinforce unit objectives, develop critical thinking skills and allow students to hear from each explorer in his or her own words.



The videos are available on a DVD bound with the Lesson Planner, on the Online Workbook and on the Classroom Presentation Tool.

Professional Development



To ensure that teachers are able to improve their classroom practice and get the most out of the *Impact* teaching resources, Dr Joan Kang Shin and Dr Jodi Crandall have developed the *Impact* Professional Development Video.

The ***Impact* Professional Development Video**, available on the Teacher's Resource Website, is hosted by Dr Joan Kang Shin and it features interviews with teachers around the world. The video provides useful insights and practical advice on the following topics:

- Characteristics of young teens
- 21st-century skills
- Global citizenship
- Learning language through content
- Student choice and classroom management
- Strategy instruction
- Classroom routines
- Effective use of media in the classroom
- Assessment
- Teaching writing

Professional development topics are also covered at point-of-use throughout the Lesson Planner.

About the Author and Series Editors

About the Author

Thomas Fast

Thomas Fast is a teacher, author and education consultant based in Japan. Over the last 20 years, he has taught and produced materials for early teen to adult learners. Tom has presented internationally, led a number of teacher-training workshops and consulted for the public and private sectors.



About the Series Editors



Dr JoAnn (Jodi) Crandall

Dr JoAnn (Jodi) Crandall is Professor Emerita and former Director of the Language, Literacy and Culture PhD Program, and Co-Director of the MA TESOL Program at the University of Maryland, Baltimore County (UMBC). She has worked in all areas of ESL/EFL including teaching, curriculum and materials development, standards development and teacher training.



Dr Joan Kang Shin

Dr Joan Kang Shin is a Professor of Practice and the Director of TESOL Professional Training Programs in the Department of Education at the University of Maryland, Baltimore County (UMBC), and she specialises in the training and professional development of teachers of English to young learners. In this position she administers numerous online professional development programs for EFL teachers in over 100 countries, including her own courses, *Teaching English to Young Learners* and *Teaching English to Teens*.

Teaching with *Impact*



National Geographic Learning's *Impact* is an exciting new series for young teens that aims to help students to better understand themselves, one another and the world they live in. The series integrates real-world content, the work and stories of National Geographic Explorers, a wide variety of cross-curricular concepts and engaging projects into a unified course of English language instruction. It uses a content-based, communicative approach to learning English, with grammar and vocabulary taught and practised in context, and multiple opportunities for authentic communication using all language skills. In every thematically organised unit, students are immersed in a topic that they explore from different curricular perspectives, using the skills of listening, speaking, reading and writing.

Young teens are actively exploring their own identities and grappling with big ideas daily. *Impact* encourages teens to consider how their learning might relate to their current or future lives and to the roles they may play in the world as adults. *Impact* challenges teens to think about their places in their communities, in their countries and in the world at large. By addressing issues of local and global importance, *Impact* stimulates students to use 21st-century skills, such as problem-solving, critical thinking and other higher-order thinking skills. In every unit of *Impact*, students use their skills to delve deeply into topics of immediate concern to them as citizens of the 21st century.

Impact reflects key concepts and principles of English-language teaching and learning as they apply to adolescent learners of English:

- Learning is a process of constructing meaning. Active learners work to make sense of their world through interaction in personal, social and academic contexts.
- All English learners, and especially teens, need multiple opportunities for questioning and communicating meaning about topics that concern them, at a level that is appropriate to their emotional, social, and intellectual stages of development.
- Learners benefit greatly from the support of knowledgeable persons (teachers, adults and peers) to help them successfully incorporate and understand new information.
- Learning is most effective when the learner is challenged to go one step beyond his or her current stage of cognitive and language development.
- Activities that encourage students to think critically about issues and that engage them in problem solving are most effective; these activities link language learning with other curricular areas.







Characteristics of Young Teens

Young teens are going through a number of changes: physical, social and cognitive. For teens, life is both exciting and confusing. They're engaged in discovering who they are and who they want to be, and in exploring the qualities that make them unique, as well as those qualities they share with their peers.

Teens combine childlike playfulness with a nearly adult ability to think critically. They're engaged in questioning, analysing and comparing points of view, and they are likely to express strong opinions about topics related to their lives. *Impact* encourages them to discuss and express their views using a variety of print and communications media, such as videos, posters, stories, comic strips, raps, poems and songs.

Adolescent English learners have already learnt at least one language and are cognitively more efficient language learners than younger children. They can infer and confirm grammar, vocabulary and language use when given sufficient opportunities to use the language to communicate. They also need to take part in activities that create language awareness and foster an understanding of, and an interest in, how language functions.

Many young people are concerned about their places in the world and their roles as global citizens. They're developing a sense of social responsibility. They're also developing a personal sense of values and looking for role models. National Geographic Explorers are people who have made a difference in the world and who challenge young teens to do the same. Eight Explorers and their work are featured in each level of *Impact*. They're presented as potential role models who can encourage teens to explore their world (Daniel Raven-Ellison), to discover the future (Bethany Ehlmann), to be curious (Katy Croff-Bell) and to test their limits (Cory Richards).



Real-World Content

Students learn language and content at the same time, so it's natural and authentic to incorporate academic content into the English classroom. Integrating grade-appropriate content from science, geography, history and other subjects complements what students are learning in their other courses, helps them develop the academic English they may need for future study and motivates them to use English in meaningful ways.

Because technology plays such a large role in the lives of teens – mobile phones, laptops, social media, texting and more are part of their everyday lives – *Impact* provides opportunities for adolescent English learners to explore the influence of media and technology in their lives. In Level 2, for example, in *Your Virtual Self* (Unit 3), students explore the many ways in which technology extends our human abilities. Explorer Amber Case, a cyborg anthropologist, challenges teens (and adults!) to think about the positive and negative aspects of our reliance on technology.

In *Everybody's Doing It* (Unit 3), students in Level 3 learn about the various ways that animals and humans organise into groups, and how those groups affect behaviour. They compare groups that they choose to belong to with others that are involuntary, and discuss the importance of groups in their lives.

Other units focus on contemporary issues such as the environmental impact of entertainment. As they read *The Footprint of Fun* (Unit 4) in Level 4, for example, students consider how they can reduce their carbon footprints and take part in sustainable activities while still enjoying themselves in public settings.

Multicultural Outlook

Today's teens live in a world made much smaller through technology and the role of English as a global language. *Impact* brings that world into the classroom, introducing teens to the diversity of global customs, traditions and ways of life. Learning about cultures other than their own helps young people develop a multicultural outlook and learn to communicate successfully with others who are using English as a global language, both in person and through social media. And of course, as we've come to expect with National Geographic and its global reach and extensive research, we can rely on the accuracy of all content, as well as the stunning photographs and visuals that accompany the text and engage and motivate adolescent learners.



In *Impact*, teens

- learn about robots and how they are used in many different aspects of life, from hospitals to the home. (Foundation Level)
- read about people with unusual and amazing jobs, who work in some of the world's most extreme and dangerous environments. (L1)
- discover that colour affects people's emotions all over the world, and is often used to express and represent one's self. (L2)
- explore the different ways in which young people in various cultures express themselves through fashion, from special T-shirts and eco-friendly clothing to hair and body accessories. (L3)
- learn how to become digital humanitarians and help others during times of conflict or crisis by employing techniques used in crisis mapping and crowdsourcing. (L4)

Cultural Connections

In addition to learning about other cultures, *Impact* provides teens with opportunities to make connections between their own and other traditions and customs. Students reflect upon their own cultures and discuss connections with their peers. The process helps them build a stronger understanding and appreciation of themselves and their place in the world. It also helps them to learn to use English to communicate and describe their values and traditions to others around them.



In Foundation level, students read about education in countries around the world. They learn about different types of schools and reflect on their own learning experiences.

After reading about the growth of the Internet and the use of electronic gadgets in Level 1, for example, teens are asked about the impact that technology has on their lives. In Level 2, after reading about Tristram Stuart's campaign to encourage consumers not to reject that extra lumpy potato or misshaped carrot, students are asked to think about food waste and ugly food.

In Level 3, students read about the many different ways people around the world have developed animation, from cartoons to films, video games, mobile phone emojis and special effects in live-action films. In Level 4, after reading about public art, teens are urged to think about how they can use art to express their feelings and ideas.

National Geographic Explorers

As noted, each unit of *Impact* presents inspiring stories about National Geographic Explorers, global citizens who are actively working in many different fields, helping students explore content from different relevant perspectives. Each unit opener presents a quote from the unit Explorer, meant for students to reflect upon and discuss in the context of their own lives.

These Explorers convey, through their work and their words, a sense of global values. They model universal values such as acting responsibly, respecting others, appreciating the environment and believing in the value of collaboration. Each unit in *Impact* includes a 'Mission' page dedicated to the Explorer's work and message for teens, as well as a short 'Meet the Explorer' video in which the Explorer shares his or her perspectives and challenges with students.

Impact gives students a window into the work of Explorers such as Jack Andraka, who at only 15 years of age invented an inexpensive and quick way to detect certain types of cancer. It took him 4,000 attempts to find the protein he needed for his experiment, and 200 attempts to find a research scientist who would accept his project. He hopes to inspire other young people to pursue their passions, no matter the odds, as he asks, 'Why not you?'



Students meet Bethany Ehlmann, an Explorer and planetary geologist who works to help the Curiosity rover navigate on Mars. Bethany hopes that she and others can someday study signs of life not only on Mars but also in other worlds. She encourages students to 'discover the future'.



Explorer Jenny Daltry, in a unit on misunderstood animals, many of which are endangered species, urges teens to 'keep an open mind'. Iain Couzin, a behavioural ecologist, studies the value of collaboration. As he notes, whether we're talking about 'invasive cells to schooling fish to human cultures, groups can accomplish what solitary individuals cannot'.



Explorer Jimmy Chin, a photographer and climber, reminds teens to be prepared, and to avoid situations where the risks are high and their level of control is low. In a unit about exploration, Corey Jaskolski remarks on the importance of learning by doing and 'showing people the world in a different light, in a new format – something that they can engage with and be excited about'.

There are other role models in *Impact* in addition to the Explorers. From successful teenage fashion designers who have donated part of their earnings to charities or environmental organisations, to a young girl who has regularly attended space camps from the age of seven in the hope of becoming an astronaut, users of *Impact* also read and learn about young people like themselves who are making a difference.



21st-century Skills

In our increasingly interconnected world, exposure to 21st-century topics and ideas is essential to student success. In addition to key subjects such as English, world languages, arts, mathematics, economics, science, geography and history 21st-century students must also develop an awareness and understanding of topics such as:

- Global awareness
- Financial, economic, business and entrepreneurial literacy
- Civic literacy
- Health literacy
- Environmental literacy
- Learning and innovation skills

Impact provides students with rich opportunities to think deeply and critically about all of these topics and others. With the help of National Geographic Explorers, students explore ideas that span the globe and affect people of all ages and backgrounds. They ask and answer questions about food consumption and waste, unusual occupations, crisis management, the performing arts, planetary geology and collective behaviour, among many other topics.

In the process, *Impact* helps teens develop the skills that have been called the 4Cs, and which are considered essential for success in the 21st century:

- Creativity and innovation
- Critical thinking and problem solving
- Communication
- Collaboration

Students are engaged in *thinking critically* about the choices they make and the problems that confront them. Together, they develop fact sheets, posters, videos or even advertisements that *communicate* their views to their peers and others. They consider the ways in which groups affect their behaviour and how, by *collaborating*, they can solve problems or accomplish goals. They analyse, compare and offer their own views. They also engage with a range of media and technology in order to *create* their own narratives. Students using *Impact* are challenged in every lesson and activity to think creatively, critically and innovatively, and to communicate and collaborate as a matter of course.

We live in a technology- and media-driven environment characterised by immediately available information and constantly evolving technology. Learning and innovation skills beyond the 4Cs are needed for the complex life and work environments students will face in today's world. In addition to the ability to collaborate and to make individual contributions, students must also be able to master a range of functional skills such as:

- Life and career skills
- ICT (Information and Communication Technology) literacy
- Information literacy
- Media literacy

With *Impact*, teens develop new ways of thinking, new ways of working, new skills for living fuller and more responsible lives, and a range ICT skills that they can use in their educations and careers.

Skills and Strategies

In addition to the 4*C*s, the four domains of listening, speaking, reading and writing, and the ICT skills necessary for success in the 21st century, today's students need to develop content knowledge and social and emotional competencies to navigate complex life and work environments, and skills and strategies to help them navigate their academic environments.

Each unit of *Impact* includes direct, explicit strategy instruction to help students effectively use English for academic and future success, and to express their views in appropriate ways.

Impact helps adolescent English learners navigate language challenges by presenting real-world situations that 21st-century students encounter every day. All speaking strategies are presented and practised in authentic contexts. For example, students might compare and contrast their parents and discuss how alike or unlike they are, or they may tell a surprising story to a partner, parts of which might be true or untrue, with the partner using expressions of surprise, such as 'That's amazing!' or 'Wow! Really?' to respond.

Speaking strategies in *Impact* include:

- Extending the conversation
- Asking for help with schoolwork
- Expressing strong opinions
- Asking for repetition and clarification
- Expressing surprise or disbelief
- Arguing and conceding
- Offering, accepting and declining advice
- Expressing interpretation and understanding

Supporting Reading Instruction

Reading is arguably the single most important skill for academic success. At this stage in their learning, adolescents are exposed to longer and more complex texts in all of their academic subjects. *Impact* provides an explicit focus on developing effective reading strategies that will not only be helpful when reading English texts, but will also help students become more effective readers of content in their own or other languages.



Each Reading lesson in your *Impact* Lesson Planner is presented in a three-step instructional plan: **Before reading**, **While reading** and **After reading**. During the lesson, students are directed to use a range of strategies before, while and after they read.

Before reading Students may be asked to talk with a partner about what they already know about a topic and related vocabulary, or, based on the title and photo, to predict what the text will be about or what they expect to learn from it.

While reading Students are given prompts that help them self-monitor and focus while they read. As effective readers, they're asked, for example, to notice details that support their beliefs, to look for similarities and differences, or to notice the order in which events happened.

After reading Readers may be asked to work in small groups to discuss a main idea, to recall important facts, to discuss the relationship of the text to their own lives, or to evaluate or comment on the text. They might be asked to identify possible good ideas not included in the reading.

Reading strategies in *Impact* include:

- Comparing and contrasting
- Scanning a text
- Making a personal connection
- Visualising
- Identifying a sequence of events
- Drawing conclusions
- Summarising
- Identifying an author's purpose

Vocabulary

A balanced approach to vocabulary instruction includes explicit instruction of a limited number of well-chosen words, along with instruction in strategies with which students can acquire words independently. *Impact* does both by introducing high-utility and academic vocabulary thematically, in context, within reading and listening activities, and by supporting students as they develop strategies for learning the vocabulary they need to communicate in English about a range of topics drawn from science, history, art and other areas of interest.



Vocabulary strategies in *Impact* include:

- The study of word parts such as prefixes, suffixes and word roots (including Greek and Latin roots)
- Using a dictionary to learn the most common meaning of a word, how to pronounce it, etc.
- Recognising common English collocations
- Identifying multiple-meaning words
- Using context clues to discover meaning

Research has shown that at least seven to twelve exposures are needed to begin to 'know' a word in terms of its literal definition, its relationship to other words, its connotations and its power of transformation into other forms. Students who can master these different aspects of knowing a word have deep vocabulary knowledge, and students who are familiar with many words have breadth of vocabulary knowledge. *Impact* helps students develop broad, deep vocabulary knowledge by providing multiple exposures to target vocabulary in contextualised activities that include pair and group work, in addition to independent Workbook practice, audio activities, whiteboard activities and videos.

Vocabulary is a fundamental part of communicating and being understood, especially in another language. The sheer number of English words to be learnt – about a million – represents a major challenge for students. Social and academic vocabularies consist not simply of single words, but also of set phrases or chunks of words, many of which are learnt together and frequently used together. In order to succeed academically and socially, adolescent English learners must master both social and academic English. While an average English speaker learns about 1,000 words a year, at least until the age of 20, a non-English-speaking student who is trying to learn the language may be lucky to achieve 25% of that rate.

Impact presents the language students need for academic and social success in highly contextualised, real-world settings. It supports vocabulary development with direct, explicit instruction in vocabulary strategies. Students learn to use common collocations in English, to break words into their component parts in order to work out their meanings, to identify the Greek and Latin roots of many English words, and to consult reference sources to find out how to correctly pronounce a new word or to confirm its meaning.

Types of Language in Impact

Target vocabulary High-utility, theme-related vocabulary that can be related to students' lives, relationships and studies at school. Target vocabulary is assessed.

Academic vocabulary The language of the classroom. Academic language plays an increasingly prominent role as students read to learn about science, social studies, maths and other areas of academic interest.

Content vocabulary Useful, theme-related vocabulary that allows students to discuss thematic content.

Related vocabulary Useful vocabulary that students might need at point of use, for example, to describe a photo in the book.

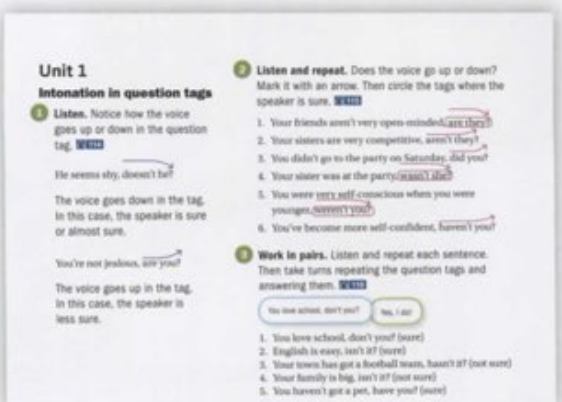
Although *Impact* provides contextualised vocabulary and complete lesson plans for all vocabulary instruction, it's helpful for teachers to become familiar with simple routines that can be used to introduce or present new vocabulary words to students.

A simple vocabulary routine

- Display and pronounce the word. Images are powerful aids to comprehension.
- Introduce the meaning of the word with a student-friendly explanation (vs. a standard dictionary definition).
- Illustrate with examples and sample sentences.
- Check for understanding by asking students to use vocabulary actively.
- Encourage wordplay.

Pronunciation

Impact includes a pronunciation topic in each unit. The pronunciation syllabus covers basic topics like the pronunciation of schwa, reductions and pronunciation of *-ed* endings. There is a strong focus on discourse-level suprasegmental features, such as stress, intonation and connected speech. The goal is to help students to be better understood by and to better understand English speakers.


Unit 1

Intonation in question tags

1 Listen. Notice how the voice goes up or down in the question tag. 1.1

He seems shy, doesn't he?

The voice goes down in the tag. In this case, the speaker is sure or almost sure.

You're not jealous, are you?

The voice goes up in the tag. In this case, the speaker is less sure.

2 Listen and repeat. Does the voice go up or down? Mark it with an arrow. Then circle the tags where the speaker is sure. 1.2

1. Your friends aren't very open-minded, are they?
2. Your sisters are very competitive, aren't they?
3. You didn't go to the party on Saturday, did you?
4. Your sister was at the party, wasn't she?
5. You were very self-conscious when you were younger, weren't you?
6. You've become more self-confident, haven't you?

3 Work in pairs. Listen and repeat each sentence. Then take turns repeating the question tags and answering them. 1.3

You love school, don't you? — Yes, I do!

1. You love school, don't you? (sure)
2. English is easy, isn't it? (sure)
3. Your town has got a football team, hasn't it? (not sure)
4. Your family is big, isn't it? (not sure)
5. You haven't got a pet, have you? (sure)

Impact's Videos

Video is a powerful tool that can help bring the world into the classroom – and bring the classroom to life! Because video allows students to view and listen to authentic representations of content, it can be a powerful tool for teachers and an especially useful aid for language learners.

In each unit of *Impact*, students encounter two short videos:

- **Main video** The main video in each unit introduces a key concept of the unit theme in a unique way, either through live-action National Geographic content or through an original animation created for this series. Each main video reviews target unit vocabulary and grammar, and exposes students to authentic communication. Corresponding Student's Book pages and activities provide opportunities for students to discuss and critically engage with the material.



- **Meet the Explorer** When students reach the 'Mission' page of each unit, they'll learn even more about the National Geographic Explorer whose mission both drives the unit theme and encourages students to be active participants in their learning. These short one-minute clips reinforce unit objectives, develop critical thinking skills and allow students to hear from each explorer in his or her own words.

The videos in *Impact* introduce students to real people using English in real ways. They provide a richer environment for learning and engage 21st-century teens who are motivated by content that both informs and entertains. More importantly, building students' media and digital literacy skills prepares them to use English both inside and outside the classroom.

Classroom Management

Classroom atmosphere Effective teachers take care to build a fair, safe and supportive classroom climate. As supportive adults rather than friends, they aim for positive relationships with all their students and consciously avoid favouritism. They have high but reasonable expectations and model the values they hope to inspire in their students – kindness, patience, fairness and respect.

Classroom rules and expectations The establishment of rules is particularly important because students need rules to function successfully. Brainstorm classroom rules with your students at the beginning of the year so that they know what's expected of them and feel responsible for following the rules. It's important to share and communicate rules clearly and simply, and to make sure they're consistently enforced with age-appropriate rewards and sanctions.

Managing You Decide activities A balance of independence and support is important to adolescent learners. They respond well to having a choice of activities and to deciding whether they want to work independently or in pairs or groups.

When given choices, adolescents also need clear direction and support from peers and teachers.



By providing students with real choices in activities and projects, *Impact* actively supports learner autonomy.
You Decide activities are an important feature of *Impact* and carry an important message: given the right support and materials, students can and shoud be accountable and responsible for their own learning.

Writing

Impact introduces students to a variety of writing genres and gives them multiple opportunities to express themselves in writing. Young teens are systematically introduced to academic writing starting in Level 1. They move from descriptive paragraphs to other types of paragraphs, and on to short essays.

In Levels 2–4, students are introduced to common academic writing genres, including Classification, Cause and Effect, Narration, Biography, Persuasion, Review, and Compare and Contrast, among others.

Scaffolded support For each writing assignment in the Student's Book, students are guided step by step in the Workbook. A complete model is provided for the writing task in each unit, so that learners have clear, meaningful examples of what they're expected to do.

Worksheets Optional Genre worksheets provide support for the academic writing genres presented in *Impact*. These include the genres listed above. Optional Process Writing worksheets guide students through the five steps: Pre-writing, Writing a First Draft, Revising, Editing and Proofreading, and Publishing.

In addition, common real-world genres are presented throughout the course in You Decide activities and projects, in Express Yourself, in the Workbook and in all course components. These include blogs, letters, presentations, travel reviews, poems, film scripts and brochures.



Assessment in *Impact*

Assessment should always mirror learning. Tests should reflect curriculum objectives and provide students with opportunities to demonstrate what they know and what they can do, in tasks and formats that are similar to what they've experienced in class. Tests should also contribute to learning on the part of both teacher and student. Assessment results should provide teachers with information on which to base subsequent instruction, especially modifications that are needed for some or all students. And, of course, the results should provide information to learners on their current strengths and weaknesses, as well as their progress in learning English.

Assessment should include a variety of techniques that correspond to learners' abilities and learning styles. That is to say, assessments should provide opportunities for learners who are not primarily linguistically, logical-mathematically or spatially inclined to demonstrate other types of intelligence or learning styles. All learners should have multiple chances to demonstrate their skills, abilities and knowledge.

Assessment should motivate learners and build learner confidence. Teachers work hard to include a variety of motivating and engaging activities in their lessons, and they're conscientious about providing praise and constructive feedback to their students in class. Students should have the same opportunities for fun, engagement and motivating feedback in assessments.

Finally, it's important to note that tests should take place over time in order to collect evidence of growth. Assessment should not be approached as an occasional but necessary, fear-inducing evil. Indeed, the more frequently students are assessed through a variety of ways, the less test anxiety they may have, and the more practised and confident they may feel.

***Impact* Assessment Options** *Impact* ensures that students engage in a wide variety of communicative activities in each thematic unit, and many of these themes and activity types are correspondingly reflected in the assessment process. *Impact* provides many opportunities for both formal and informal assessment of different types. The *Impact* assessment programme includes various kinds of written tests: placement tests and level pre-tests, eight unit quizzes, two mastery tests and final tests, together with an Audio CD for listening and speaking assessment.

Formal assessment in *Impact* is provided in the form of *ExamView®* test banks. Banks include test items that allow teachers to create a pre-test for use at the beginning of the school year, unit quizzes, mastery tests and a final exam. A placement test is also provided. In addition, with the use of the Assessment CD-ROM with *ExamView®*, all of the quizzes and tests are easily generated and customisable to the needs of each teacher's students. **Formative assessment** opportunities appear at the end of each lesson and align directly to that lesson's objectives.

Accurate assessment reflects not only what students can recognise and produce on a written test, but also what they can perform or do as they actually use the language in real or realistic contexts. *Impact* therefore provides a wealth of opportunities for **informal assessment**. These include pair and group work, review pages in the Student's Book, Workbook activities and the Classroom Presentation Tool, among others. Many of the products students create, including end-of-unit projects, may also be assembled as part of a **portfolio assessment** system.

Pacing Guides

2–3 hours per week

Use Warm Up and Consolidate sections from the Lesson Planner or replace with your own Warm Up and Consolidate activities.

Week 1	Week 2	Week 3	Week 4	Week 9*
Unit Opener: Introduce the Unit **Vocabulary:** Warm Up; Present; Practise; Apply; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Unit Opener and Vocabulary	**Grammar 1:** Warm Up; Present; Practise; Apply; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Grammar 1	**Video:** Before You Watch; While You Watch; After You Watch **Resources** · Student's Book · Online Workbook · Video (DVD/Online Workbook/CPT) · Classroom Presentation Tool: Video	**Writing:** Warm Up; Present; Read the Model; Plan; Write **Mission:** Mission **Project:** Prepare **Resources** · Student's Book · Workbook/Online Workbook · Process Writing / Genre Writing Worksheets (Teacher's Resource CD-ROM/Website) · Video (DVD/Online Workbook/CPT) · Classroom Presentation Tool: Writing	**Express Yourself:** Present; Practise; Connect; Prepare **Resources** · Student's Book · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Express Yourself
Speaking Strategy: Warm Up; Present; Practise; Apply; Consolidate **Resources** · Student's Book · Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Speaking Strategy	**Reading:** Warm Up; Before You Read; While You Read; After You Read; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Reading	**Grammar 2:** Warm Up; Present; Practise; Apply; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Grammar 2	**Project** *(continued)*: Share **Assessment** **Resources** · Student's Book · Classroom Presentation Tool: Project and Review Games · Unit Quiz (*ExamView®*)	**Express Yourself** *(continued)*: Share **Resources** · Classroom Presentation Tool: Express Yourself *Express Yourself gives students an opportunity to synthesise what they have learnt and focus on creative expression after every two units. The Express Yourself for Units 1 and 2 will be covered in Week 9.

Pacing Guides

3–4 hours per week

Extend activities, including Extend Worksheets, are optional.

Week 1	Week 2	Week 3	Week 4	Week 9*
Unit Opener: Introduce the Unit; Extend **Vocabulary:** Warm Up; Present; Practise **Resources** · Student's Book · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Unit Opener	**Grammar 1:** Warm Up; Present; Practise **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Grammar 1	**Reading** *(continued)*: After You Read; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Classroom Presentation Tool: Reading	**Writing:** Warm Up; Present; Read the Model; Plan; Write **Resources** · Student's Book · Workbook/Online Workbook · Process Writing / Genre Writing Worksheets (Teacher's Resource CD-ROM/Website) · Classroom Presentation Tool: Writing	**Express Yourself:** Present; Practise; Connect **Resources** · Student's Book · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Express Yourself
Vocabulary *(continued)*: Apply; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Extend Worksheets (Teacher's Resource CD-ROM/Website CPT) · Classroom Presentation Tool: Vocabulary	**Grammar 1** *(continued)*: Apply; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Grammar 1	**Video:** Before You Watch; While You Watch; After You Watch **Resources** · Student's Book · Online Workbook · Video (DVD/Online Workbook/CPT) · Classroom Presentation Tool: Video	**Writing** *(continued)*: Revise; Edit and Proofread; Publish **Mission:** Mission **Project:** Prepare **Resources** · Student's Book · Process Writing / Genre Writing Worksheets (Teacher's Resource CD-ROM/Website) · Video (DVD/Online Workbook) · Classroom Presentation Tool: Writing	**Express Yourself** *(continued)*: Prepare **Cumulative Review** **Resources** · Student's Book · Classroom Presentation Tool: Express Yourself · Cumulative Review Worksheets (Teacher's Resource CD-ROM/Website)
Speaking Strategy: Warm Up; Present; Practise; Apply; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Extend Worksheets (Teacher's Resource CD-ROM/Website CPT) · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Speaking Strategy	**Reading:** Warm Up; Before You Read; While You Read **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Reading	**Grammar 2:** Warm Up; Present; Practise; Apply; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Grammar 2	**Project** *(continued)*: Share **Assessment** **Resources** · Student's Book · Classroom Presentation Tool: Project · Unit Quiz (*ExamView®*)	**Express Yourself** *(continued)*: Share **Resources** · Student's Book · Classroom Presentation Tool: Express Yourself *Express Yourself gives students an opportunity to synthesise what they have learnt and focus on creative expression after every two units. The Express Yourself for Units 1 and 2 will be covered in Week 9.

Pacing Guides

5–6 hours per week

Week 1	Week 2	Week 3	Week 4	Week 9*
Unit Opener: Introduce the Unit; Extend **Resources** · Student's Book · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Classroom Presentation Tool: Unit Opener	**Grammar 1:** Warm Up; Present; Practise **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Grammar 1	**Video:** Before You Watch; While You Watch; After You Watch **Resources** · Student's Book · Online Workbook · Video (DVD/Online Workbook/CPT) · Classroom Presentation Tool: Video	**Mission:** Mission **Project:** Prepare **Resources** · Student's Book · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Video (DVD/Online Workbook/CPT) · Classroom Presentation Tool: Mission and Project	**Express Yourself:** Present; Practise; Connect **Resources** · Student's Book · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Express Yourself
Vocabulary: Warm Up; Present; Practise **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Vocabulary	**Grammar 1** *(continued)*: Apply; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Grammar 1	**Grammar 2:** Warm Up; Present; Practise; Apply; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Grammar 2	**Unit Review** **Resources** · Unit Review Worksheets (Teacher's Resource CD-ROM/Website) · Classroom Presentation Tool: Review Games	**Express Yourself** *(continued)*: Prepare **Resources** · Student's Book · Classroom Presentation Tool: Express Yourself
Vocabulary *(continued)*: Apply; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Classroom Presentation Tool: Vocabulary	**Reading:** Warm Up; Before You Read; While You Read **Resources** · Student's Book · Workbook/Online Workbook · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Reading	**Writing:** Warm Up; Present; Read the Model; Plan; Write **Resources** · Student's Book · Workbook/Online Workbook · Process Writing / Genre Writing Worksheets (Teacher's Resource CD-ROM/Website) · Classroom Presentation Tool: Writing	**Project** *(continued)*: Share **Resources** · Student's Book · Classroom Presentation Tool: Project	**Express Yourself** *(continued)*: Share **Resources** · Student's Book · Classroom Presentation Tool: Express Yourself
Speaking Strategy: Warm Up; Present; Practise; Apply; Extend; Consolidate **Resources** · Student's Book · Online Workbook · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Audio (Audio CD/Website/CPT) · Classroom Presentation Tool: Speaking Strategy	**Reading** *(continued)*: After You Read; Extend; Consolidate **Resources** · Student's Book · Workbook/Online Workbook · Extend Worksheets (Teacher's Resource CD-ROM/Website) · Classroom Presentation Tool: Reading	**Writing** *(continued)*: Revise; Edit and Proofread; Publish **Resources** · Student's Book · Workbook/Online Workbook · Process Writing / Genre Writing Worksheets (Teacher's Resource CD-ROM/Website) · Classroom Presentation Tool: Writing	**Assessment** **Resources** · Unit Quiz (*ExamView*®)	**Cumulative Review** **Resources** · Cumulative Review Worksheets (Teacher's Resource CD-ROM/Website)

*Express Yourself gives students an opportunity to synthesise what they have learnt and focus on creative expression after every two units. The Express Yourself for Units 1 and 2 will be covered in Week 9.

Scope and Sequence



1 Pushing the Limits



2 It Takes a Village

	1 Pushing the Limits	2 It Takes a Village
THEME	Pushing mental and physical limits	Digital humanitarianism and crowdsourcing
LANGUAGE OBJECTIVES	· Talk about extreme sports and pushing mental and physical limits · Show interest in a conversation · Use embedded clauses, questions and commands · Add emphasis · Write a biography of an athlete	· Talk about digital humanitarians and crowdsourcing · Make suggestions and agree or disagree · Use future tenses to describe events · Use quantifiers to express amounts · Write a persuasive essay about participation in community service
VOCABULARY	determination enable endurance extreme hazardous limit mental obstacle opponent overcome pain physical push oneself role model achieve boundary unbelievable unreachable event non-traditional represent struggle beyond consequence in control limb peak performance **Vocabulary Strategies:** · Prefix *un-* · Use a dictionary	amount the big picture crisis crowdsourcing data evidence expand generate humanitarian measure monitor process scale upload collaboration coordinate relief situation update cause donate fundraiser network volunteer empower engineer face generation innovation **Vocabulary Strategies:** · Suffixes *-ion, -tion* · Identify parts of speech
SPEAKING STRATEGY	Showing interest in a conversation	Making suggestions and agreeing or disagreeing
GRAMMAR	**Embedded clauses, questions and commands** *I think extreme sports are dangerous.* **Adding emphasis** *The reason (why) I won't go surfing is that I don't like swimming in the sea.*	**Future tenses:** Describing events in the future *Over the next few years, people will look online to find volunteers to help with disaster relief.* **Quantifiers:** Expressing amounts *Half of/Fifty per cent of the world's population is ...*
READING	*No Limits* Amy Purdy sees her limitations as a gift that has helped her do amazing things. **Reading Strategy:** Summarise	*Focus on the Future* Kelvin Doe, also known as DJ Focus, is creating a future he wants to live in. **Reading Strategy:** Use text features for comprehension
VIDEO	*A Tribute to Discomfort*	*Crisis Mapping*
MISSION	**Test Your Limits** National Geographic Photography Fellow: **Cory Richards**, Photojournalist	**Do Your Part** National Geographic Explorer: **Patrick Meier**, Crisis Mapper
WRITING	Genre: **Biography** Focus: Identify chronological order	Genre: **Persuasive essay** Focus: Express point of view
PROJECT	· New experience · Instructional video · Interview	· Charity awareness · Teen inventor · Technology invention
PRONUNCIATION	Intonation in embedded *yes/no* questions	Stress in compound nouns
EXPRESS YOURSELF	Creative Expression: **Graphic novel** *The Adventures of Crisis Crusher* Making connections: Pushing limits while working to help others	



3 Food Matters



4 The Footprint of Fun

	3 Food Matters	4 The Footprint of Fun
THEME	Food sustainability	The environmental impact of entertainment
LANGUAGE OBJECTIVES	· Talk about food sustainability · Offer, accept or decline advice · Use mixed conditionals to express how things would be different · Use double comparatives to describe outcomes · Write a review of your favourite restaurant	· Talk about the environmental impact of entertainment · Defend your opinions · Use passives to describe actions and processes · Use gerunds and infinitives after verbs · Write an essay about a fun activity that may be harmful to the environment
VOCABULARY	commercial conservationist convenient diverse globalisation harvest impact local packaged reflection taste wholesome attitude grateful ignore main course protein recipe restore revolutionary spice consistent organic sustainable vertical **Vocabulary Strategies:** · Borrowed words · Use context of unit	accessible amusement attraction compost consume economic enjoyable excessive facility industry litter movement participate result sensitive benefit non-profit proactive take action challenge damage demand harm waste cost development maintain venue **Vocabulary Strategies:** · Prefix *pro-* · Use context of sentence
SPEAKING STRATEGY	Offering advice and accepting or declining advice	Defending your opinion
GRAMMAR	**Mixed conditionals:** Expressing how things would be different *If I hadn't learnt about overfishing, I would still be eating tuna.* **Double comparatives:** Describing outcomes *The more people there are in the world, the more food we need to produce.*	**Passives:** Describing actions and processes *What has been done by musicians to reduce their ecological footprint?* **Verbs followed by gerunds or infinitives** *Parks must continue coming up with/to come up with ways to re-use water.*
READING	*Grow It Here, Eat It Here* With 80 per cent of the world's population living in cities by the year 2050, we need to consider indoor farming. **Reading Strategy:** Connect text to prior knowledge	*Game Over* After the torch goes out, what happens to Olympic sites? **Reading Strategy:** Identify the author's purpose
VIDEO	*Should We Eat More Bugs?*	*The Footprint of Fans*
MISSION	**Know Your Food** National Geographic Explorer: **Barton Seaver**, Chef/ Conservationist	**Reduce Your Footprint** National Geographic Ambassador to the Arts: **Jack Johnson**, Musician
WRITING	Genre: **Restaurant review** Focus: Use facts and opinions to review	Genre: **Problem and solution essay** Focus: Present facts and personal reflection
PROJECT	· Sustainable lunch menu · Chef profile · Cooking show	· Ad for clean fun · Song about the environment · Plan to reduce footprint of fun at school
PRONUNCIATION	The *ar* sound	Expressing emotions with intonation
EXPRESS YOURSELF	Creative Expression: **Online invitation** *Reduce, Re-use, Recycle, Rock!* Making connections: Sustainable eating and fun	



5 Why We Explore



6 Giants

	5 Why We Explore	6 Giants
THEME	Why it's important to explore	Giant plants and animals of the past and present
LANGUAGE OBJECTIVES	· Talk about why it's important to explore · Use new phrases to hesitate or buy time when answering questions · Use narrative tenses to tell a story · Use *the* correctly when talking about places · Write an essay that compares and contrasts exploring in the field and exploring virtually	· Talk about giant plants and animals of the past and present · Speculate about the past and the future · Use relative clauses with *that, which, where, who* and *whose* to describe · Use reduced relative clauses · Write a news report about a discovery from the past or present
VOCABULARY	curious drive encounter exciting expert high-tech investigate knowledge look into pioneer purpose remote research achievement encourage engage in require educate globe motion route set a record associated gene motivate trait **Vocabulary Strategies:** · Prefix *-en* · Use pronunciation	ancient catastrophe develop diameter enormous exception extinction frightening heart huge jaw prehistoric stomach weigh carnivore gigantic herbivore massive era fierce prey on times advantage extraordinary significant useless **Vocabulary Strategies:** · Synonyms and antonyms · Use word parts
SPEAKING STRATEGY	Hesitating or buying time when answering questions	Speculating about the past and the future
GRAMMAR	**Narrative tenses:** Telling a story *Barrington Irving had been preparing to become a pilot since he was 15.* **Geographic use of *the*** *I'm going to the Himalayas to climb Mount Everest.*	**Relative clauses:** Defining and describing *Megalodon, which was a fierce predator, was able to catch the largest whales.* **Reduction of relative clauses** *My brother, (who is) a filmmaker, created a documentary about manta rays.*
READING	*The Explorer Gene* Are we born to explore? **Reading Strategy:** Make a personal connection	*Discovering* Spinosaurus How one determined palaeontologist found a river monster in the Sahara **Reading Strategy:** Make inferences
VIDEO	*Why Is It Important to Explore?*	*Super Tree*
MISSION	**Learn by Doing** National Geographic Explorer: **Corey Jaskolski**, Engineer/ Inventor	**Make Big Plans** National Geographic Explorer: **Nizar Ibrahim**, Palaeontologist
WRITING	Genre: **Compare and contrast essay** Focus: Use transitions to compare	Genre: **News report** Focus: Include answers to the 5 *W*s and *How*
PROJECT	· Expedition plan · Explorer profile · Exploration from home	· Animated action film · 'Find the Fossil' game · Presentation on a modern giant
PRONUNCIATION	Sounds of letter *x*	Pausing: Relative clauses
EXPRESS YOURSELF	Creative Expression: **Science-fiction story** *A Journey to the Centre of the Earth* Making connections: Exploration and discovery and giants past and present	



7 Creative Problem-Solving



8 Art Connections

	7 Creative Problem-Solving	8 Art Connections
THEME	Problems and how people creatively solve them	Art and our connection to it
LANGUAGE OBJECTIVES	· Talk about problems and how people can solve them creatively · Ask someone to defend an opinion · Use *wish* and *if only* to express wishes and regrets · Use adverbs to express different levels of intensity · Write an exemplification essay about creative problem-solving	· Talk about how art connects us across time, space and cultures · Express interpretation and understanding · Use reported speech to say what someone said · Use two- and three-word phrasal verbs · Write a review of a piece of art
VOCABULARY	3D printer application concept device do-it-yourself experiment failure hands-on hardware inspire open-source play around with resourceful software solve affordable approach flexible innovator disabled interpret transform wireless amount to discourage persistent success turn away **Vocabulary Strategies:** · Latin roots (*nov*, *flex*) · Identify antonyms	accomplishment artwork come up with controversial depict draw in mark medium perspective power preserve primitive reaction technique track down decorative dramatic impressive symbolic admire bold critic theme detailed exhibition honour miniature needle **Vocabulary Strategies:** · Suffixes *-ic* and *-ive* · Identify collocations
SPEAKING STRATEGY	Asking someone to defend an opinion	Interpreting and expressing understanding
GRAMMAR	***Wish* and *if only*:** Expressing wishes and regrets *I wish I were at the technology fair right now.* **Adverbs:** Expressing different levels of intensity *Inventor Kelvin Doe is so clever. But he is rather shy.*	**Reported speech:** Describing what others say *He suggested that art should reflect the world we live in.* **Two- and three-word phrasal verbs** *Artists want to draw in their viewers.* *A true artist comes up with unique ways to express herself.*
READING	*Great Failures* People who learnt to try and try again **Reading Strategy:** Take notes	*Microscopic Marvels* Artist Willard Wigan knows how to make a big impression in small places. **Reading Strategy:** Ask questions about a text
VIDEO	*Sanga's Solution*	*A Photographer's Life*
MISSION	**Don't Give Up** National Geographic Explorer: **Tan Le**, Innovator/Entrepreneur	**Connect Through Art** National Geographic Photographer: **Stephen Alvarez**
WRITING	Genre: **Exemplification essay** Focus: Use relevant examples to explain a topic	Genre: **Art review** Focus: Answer key questions to provide facts and opinions
PROJECT	· Idea pitch · Profile of a great failure · App advertisement	· Art auction · Art book · Cave art
PRONUNCIATION	Variations in stress and intonation	Stress with two- and three-word phrasal verbs
EXPRESS YOURSELF	Creative Expression: **Contest** *Droidganiser* Making connections: Creative problem-solving and art	

In This Unit

Theme This unit is about how meeting physical and mental challenges changes us and our relationship to other people and the world.

Content Objectives
Students will
- describe physical and mental challenges faced and identify ways that people overcome obstacles.
- describe how pushing beyond limits helps people understand themselves and connect to the world and others.

Language Objectives
Students will
- talk about extreme sports and pushing mental and physical limits.
- show interest in a conversation.
- use embedded clauses, questions and commands.
- add emphasis.
- write a biography of an athlete.

Vocabulary
pages 10–11 *determination, enable, endurance, extreme, hazardous, limit, mental, obstacle, opponent, overcome, pain, physical, push oneself, role model*
page 12 *achieve, boundary, unbelievable, unreachable*
page 15 *events, non-traditional, represent, struggle*
page 16 *beyond, consequence, in control, limb, peak performance*
Vocabulary Strategies Prefix *un-*; Use a dictionary

Speaking Strategy Showing interest in a conversation

Grammar
Grammar 1 use embedded clauses, questions and commands
Grammar 2 add emphasis

Reading *No Limits*
Reading Strategy Summarise

Video Scene 1.1: *A Tribute to Discomfort*; Scene 1.2: Meet Cory Richards

Writing Biography

National Geographic Mission Test Your Limits

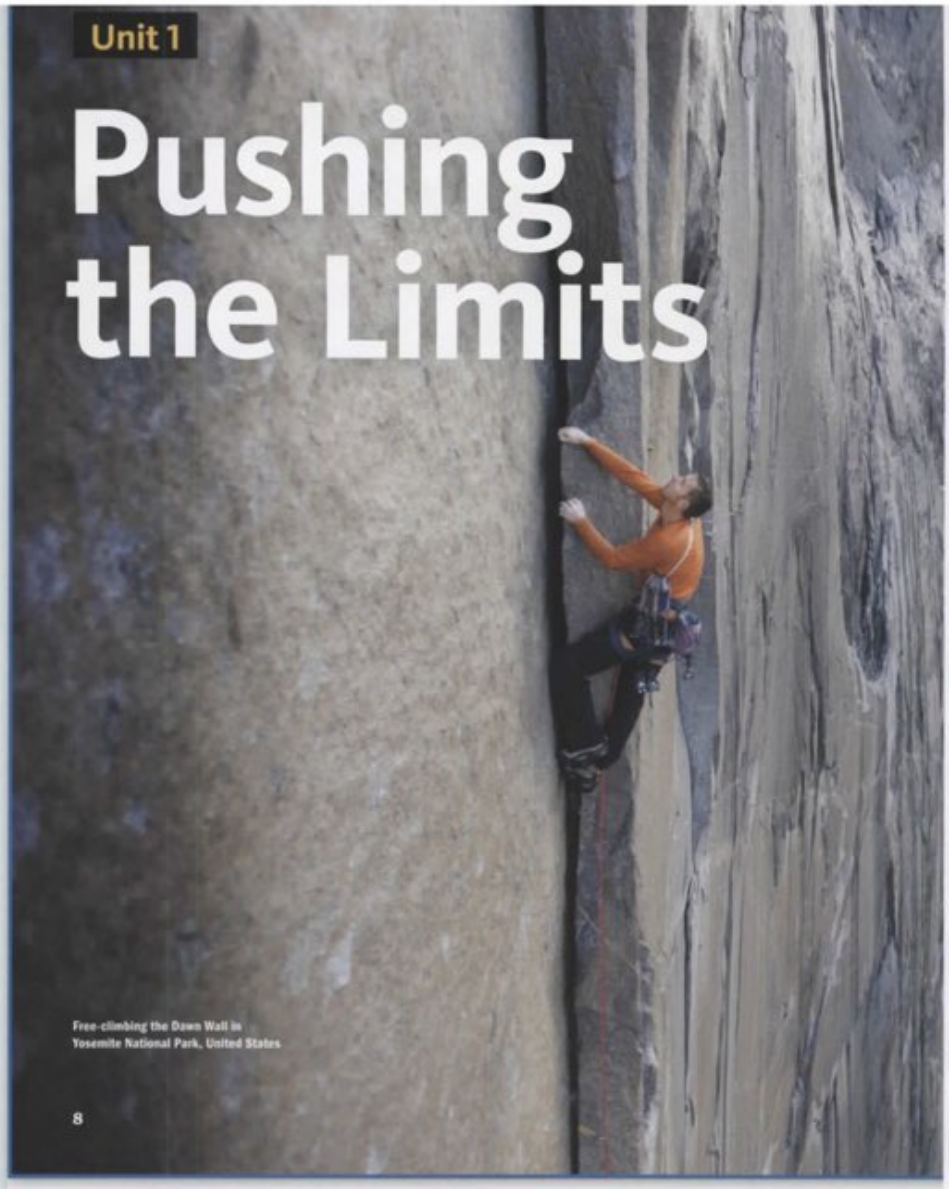
Project
- New experience
- Instructional video
- Interview

Pronunciation Intonation in embedded *yes/no* questions

Pacing Guides 4.1.1, 4.1.2, 4.1.3

Unit 1

Pushing the Limits



Free-climbing the Dawn Wall in Yosemite National Park, United States

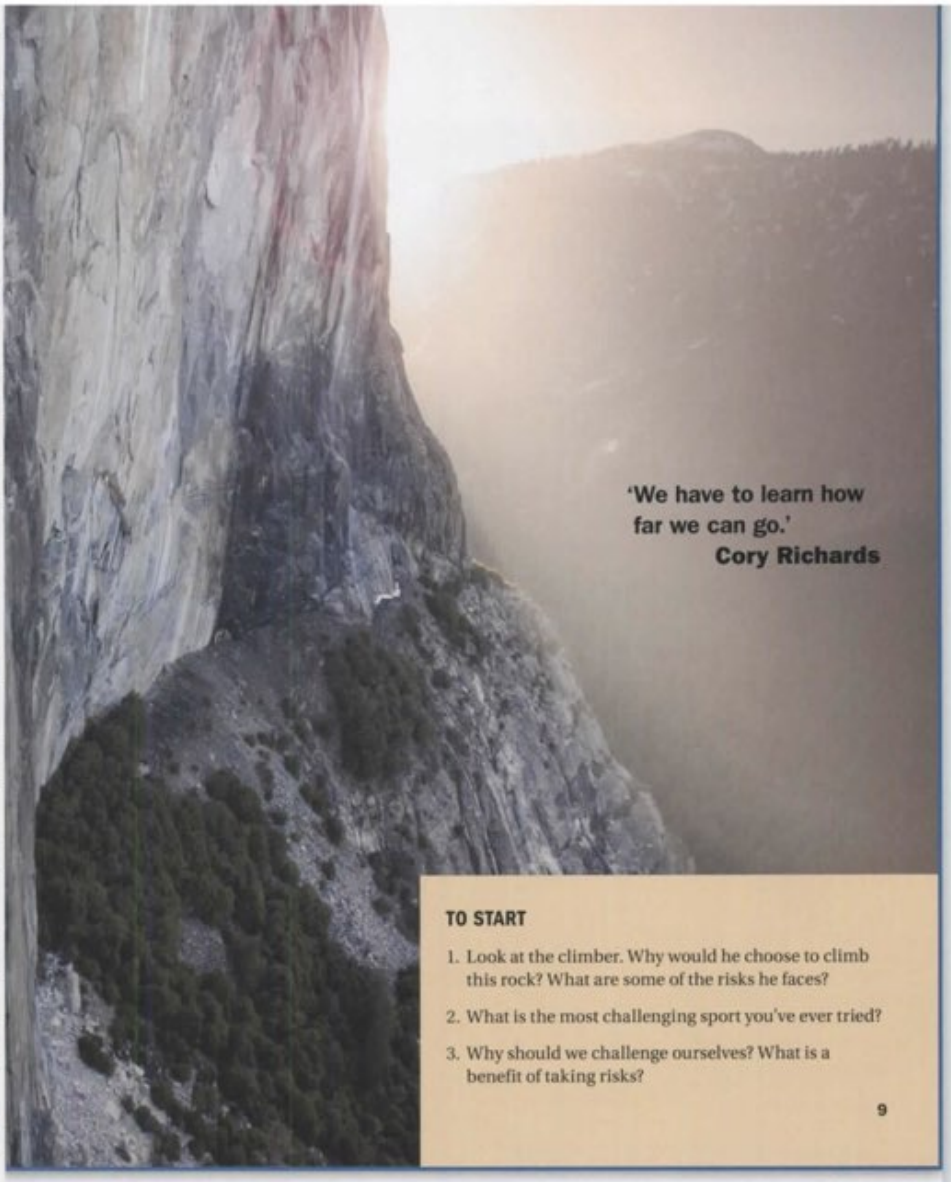
8

Introduce the Unit

- **Build background** Say *Some people enjoy doing activities and sports on their own.* Ask *What are some activities and sports you can do by yourself?* (running, cycling, fishing) Say *People may do these activities to relax or to compete against themselves. We're going to read about people who push themselves while doing a sport or activity.* To push yourself *means to do something that is harder than you have ever done before.*

- Tell students to open their books at pages 8–9. Ask *What can you see in the photo?* (a man climbing a wall of rock)

- Ask questions such as these to encourage further discussion:
  Where is the man doing the rock climbing?
  (Yosemite National Park in the United States)
  Do you think the rock is difficult to climb? Why or why not?
  (Yes, because it goes straight up.)
  What skills do you think a rock climber needs to have?
  (muscle strength, good sense of balance)



- Discuss with students the information in About the Photo. If possible, use a map or globe to show the location of Yosemite National Park.
- Ask a to student read aloud Question 1 on page 9. Encourage a class discussion about the climber's reasons for climbing and the risks he faces. Write the headings *Reasons* and *Risks* on the board and record students' ideas.
- Ask another student to read aloud Question 2. Tell students that something that is *challenging* is difficult. Make a list of sports that students identify as challenging on the board.
- Next, ask a student to read aloud the quote by Cory Richards. Then ask the student to read aloud Question 3. Relate the quote to the question and encourage a class discussion of students' ideas.

Extend

- Hand out **Worksheet 4.1.1**. Put students into pairs. Explain that partners will be writing about and discussing extreme and difficult sports.

UNIT OPENER

Objectives
Students will
- discuss risks faced by a climber in a photo.
- discuss challenging sports and the benefits of taking risks.

Resources Worksheet 4.1.1 (Teachers Resource CD-ROM/Website); CPT: Unit Opener

Materials world map or globe *(optional)*

BE THE EXPERT

About the Photo

Tommy Caldwell is shown free-climbing El Capitan in California's Yosemite National Park. Free-climbers use their hands and feet to ascend a rock, relying on ropes and gear only for safety reasons, such as stopping a fall. Because of the steepness of its vertical face, the section of rock called the Dawn Wall was widely considered too difficult to free-climb. Tommy and his climbing partner Kevin Jorgeson became the first climbers to successfully free-climb the Dawn Wall, 915 m. (3,000 ft.) and reach the top of El Capitan, 1,100 m. (3,600 ft.), in January 2015 after a grueling 19-day journey.

Related Word

rope

VOCABULARY

Objectives

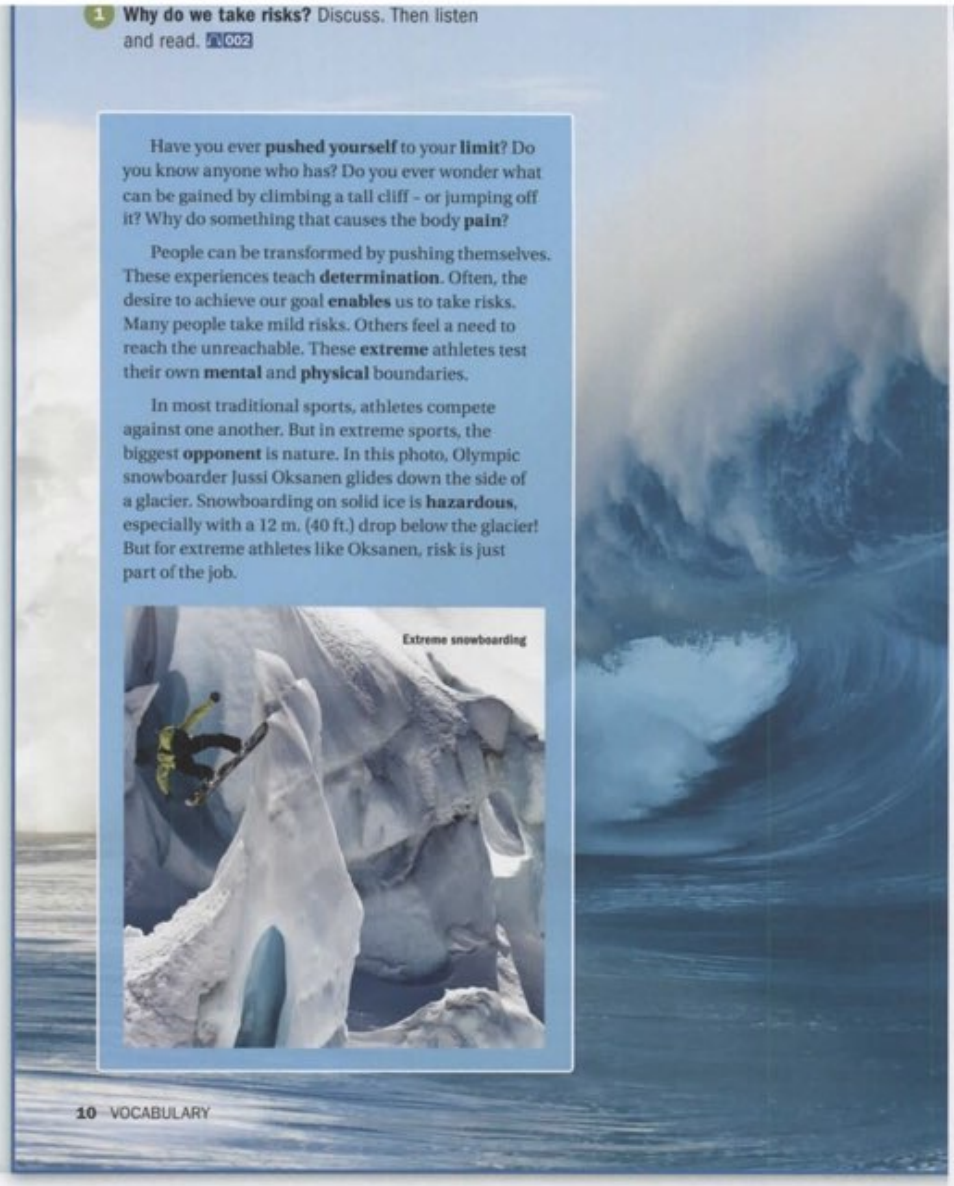
Students will

- identify and use vocabulary related to the characteristics of athletes who do extreme sports.
- use new vocabulary to read about and discuss the reasons people do extreme sports and the risks they take.

Target Vocabulary *determination, enable, endurance, extreme, hazardous, limit, mental, obstacle, opponent, overcome, pain, physical, push oneself, role model*

Content Vocabulary *glacier, transform*

Resources Worksheet 4.1.2 (Teacher's Resource CD-ROM/Website); Tracks 002–003 (Audio CD/Website/CPT); CPT: Vocabulary



1 Why do we take risks? Discuss. Then listen and read. 002

Have you ever **pushed yourself** to your **limit**? Do you know anyone who has? Do you ever wonder what can be gained by climbing a tall cliff – or jumping off it? Why do something that causes the body **pain**?

People can be transformed by pushing themselves. These experiences teach **determination**. Often, the desire to achieve our goal **enables** us to take risks. Many people take mild risks. Others feel a need to reach the unreachable. These **extreme** athletes test their own **mental** and **physical** boundaries.

In most traditional sports, athletes compete against one another. But in extreme sports, the biggest **opponent** is nature. In this photo, Olympic snowboarder Jussi Oksanen glides down the side of a glacier. Snowboarding on solid ice is **hazardous**, especially with a 12 m. (40 ft.) drop below the glacier! But for extreme athletes like Oksanen, risk is just part of the job.

Extreme snowboarding

10 VOCABULARY

Warm Up

- **Activate prior knowledge** Draw a three-column table on the board with the headings *Outdoor Sport*, *Nature* and *Risks*. Say *I'm going to list different types of outdoor sports. For each sport, I want you to tell me the kind of natural conditions in which people do the sport and the risks involved in the sport.* As an example, write *rock climbing* in the first column, *mountains* in the second column and *falling from a height* in the last column. Then list other sports, such as the following, in the first column and ask students to name natural conditions and risks for each: *snowboarding* (cold winter; crashing); *surfing* (ocean waves; pulled out to sea); *marathon running* (all kinds of weather; leg injury). Record students' responses in the table.
- Tell students to use the words in the table to describe the conditions and risks for each sport. Model an example for students. Point to (*rock climbing*) and say *Rock climbing is done in the mountains. There is a risk of falling from a height.*

Present 1 2

- Tell students to open their books at pages 10–11. Ask a student to read aloud the Activity 1 question at the top of page 10. Say *We've talked about different kinds of outdoor sports, the conditions in which people do these sports and the risks taken. Now let's list some reasons why people take risks to do these sports.*

People take risks to do _____

because _____.

Invite several students to take turns completing the sentence frame orally. (Sample answer: People take risks to do snowboarding because they like to slide fast down a mountain.)



The same is true for big-wave surfers. Animals such as sharks and jellyfish pose serious risks to surfers. Another **obstacle** that surfers must **overcome** is the force of the water. After this photo was taken, surfer Koa Rothman was taken under by the unbelievable force of the wave. So why do it? 'The view I had right here was one of the most amazing things I have ever seen in my life,' says Koa. 'Being in the middle of all that energy is unexplainable!'

Athletes who participate in the *Marathon des Sables*, or MdS, need to have incredible **endurance**. In this desert marathon, participants must cross a distance of approximately 250 km. (155 mi.) over five or six days. The event takes place in the Sahara Desert, where temperatures can reach more than 50°C (122°F). It's no wonder that the MdS is considered the toughest race on Earth!

The athletes shown in the photos are **role models** for anyone seeking adventure. Do they inspire you to push your own limits?

2 LEARN NEW WORDS Listen and repeat. 003

3 Work in pairs. Which of these sports would you try? Why would you try it? What risks would you face?

VOCABULARY **11**

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About the Photo

A participant is shown climbing a sand dune during the third stage of the *Marathon des Sables (MdS)* on 1st April, 2009. The 'Marathon of the Sands' has been held in the southern Moroccan desert every year since 1986. In recent years, more than 1,000 runners have competed in the *MdS*.

Teaching Tip

Students process language at different speeds. Some students may need extra time before responding to a question or completing a sentence. Wait a few seconds when asking a question to give students time to think about the answer.

- **1** Play **Track 002** and tell students to listen and read. Discuss the reading with students. Ask questions such as:

  What is the biggest opponent that extreme athletes compete against?

  Why is snowboarding down the side of a glacier hazardous?

  What kinds of obstacles do big-wave surfers face?

- **2 LEARN NEW WORDS** Play **Track 003**. Tell students to listen and repeat. Tell partners or small groups to take turns saying each word.

- List all the vocabulary words on the board. Then tell partners or small groups to write sentences using the vocabulary words. Say *Work with your (partner) to write sentences that use the vocabulary words. Try to use at least two vocabulary words in each sentence. After you've written sentences for all the vocabulary words, you'll share some of the sentences with the class.*

- Model an example for students. Say *Athletes who do extreme sports use both physical and mental strength.* Invite each group to share a sentence with the class. Place a tick next to each vocabulary word on the board after it has been used in a sentence. Continue asking groups to share sentences with the class until all the vocabulary words have been used.

Practise 3 4 5

- **3** Put students into pairs. Say *Think about the different kinds of extreme sports you've read about: extreme snowboarding, big-wave surfing and running a desert marathon. Consider which of these sports you might like to try. Now read the Activity 3 questions on page 11.* Tell partners to ask and answer the questions in Activity 3. Say *Try to use your new words in your answers.*

VOCABULARY

Objectives

Students will

- practise using vocabulary related to characteristics of athletes who do extreme sports.
- use a vocabulary strategy to learn new vocabulary.

Target Vocabulary *achieve, boundary, unbelievable, unreachable*

Vocabulary Strategy Prefix *un-*

Academic Language *necessary, characteristics, role play*

Content Vocabulary *avalanche*

Resources Online Workbook/Workbook pages 2–3; Tracks 004–005 (Audio CD/Website/CPT); CPT: Vocabulary

Materials small ball or beanbag

4 **Read and write the words from the list.** Make any necessary changes.

determination	hazardous	mental	obstacle	opponent
overcome	pain	physical	push himself	role model

Photographer and adventurer Cory Richards is used to difficult conditions. Cory has *overcome* many difficult *obstacles* to bring us some incredible outdoor action photography. Cory believes that pushing his *physical* and *mental* limits helps him to better connect with himself and with the world.

In 2011, Cory successfully climbed an 8,000 m. (26,000 ft.) peak in the middle of winter. However, due to the *hazardous* conditions, this challenge nearly cost him his life. On the way down, Cory and his team were caught in a major avalanche. 'Once the avalanche took us, there was no more fear,' says Cory. Although this experience scared him, he still takes risks to get a great photo. Cory's *determination* and endurance make him a great *role model*.

5 **LEARN NEW WORDS** Listen to the words and match them to the definitions. Then listen and repeat. 004 005

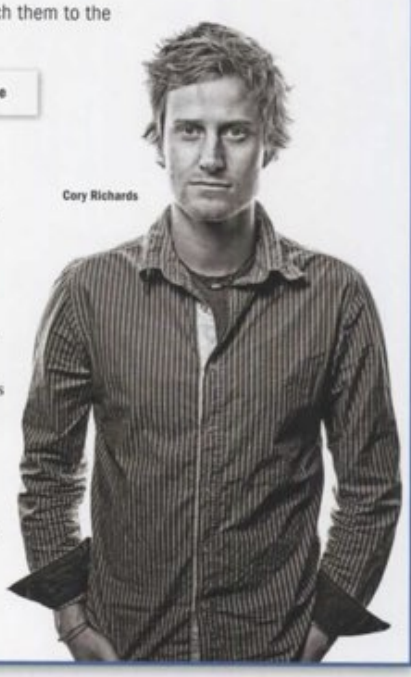
achieve	boundary	unbelievable	unreachable

unbelievable 1. incredible

boundary 2. limit

achieve 3. gain through hard work or effort

unreachable 4. impossible



Cory Richards

6 **YOU DECIDE** **Choose an activity. Work in pairs.**

1. Talk about characteristics that adventurers like Cory need to have. Which of these characteristics do you have? Which would you like to have?
2. Role-play an interview between a TV reporter and an extreme athlete who has just completed a new challenge.
3. Invent an extreme sport. Work together to make a poster describing a competition for this sport.

12 VOCABULARY

- **4** Tell students to turn to page 12. Choose several students to read aloud the words and phrases in the word box. Tell them to choose two words or phrases and use them in a sentence. Before students do Activity 4, explain that an *avalanche* is a dangerous event in which a huge amount of snow and ice falls very fast down the side of a mountain. Then tell students to complete Activity 4 independently. Invite a student to read aloud the completed paragraphs.
- **5** **LEARN NEW WORDS** Play **Track 004**. Tell students to listen and write each word next to its definition in items 1–4. Then play **Track 005** and tell students to repeat each word and sentence. Review answers for items 1–4 as a class. Then tell students to look for each word in context on pages 10–11.

- **Vocabulary Strategy** Point out the word *unreachable* on page 10. Write the word on the board and circle the *un-* at the beginning. Explain that the meaning of *un-* is 'not' and that placing *un-* before a word such as *reachable* changes its meaning to 'not reachable.' Point out that *in-* (incredible) and *im-* (impossible) at the beginning of words also give the words the meaning of 'not credible or believable' and 'not possible.' Help students place *un-* at the beginning of *traditional* (untraditional) and *aware* (unaware) and say their meanings. (not traditional, not aware)

Apply 6

- 6 YOU DECIDE Put students into pairs. Tell both students to re-read the text on pages 10–11 and the completed paragraphs in Activity 4 on page 12. Say *Work with your partner to describe characteristics that extreme athletes and adventurers need to have. Use the vocabulary words in your descriptions.*

- **Think-Pair-Share** Model silently scanning the text for characteristics that extreme athletes and adventurers need to have. Say *I recall that Cory Richards is both a photographer and an adventurer. I wonder what characteristics or traits he has. I'll skim the paragraphs about Cory on page 12 to find out.* Then tell students to choose and complete one of the three choice activities. Remind them to take a few moments to silently think over the activity they choose before discussing it with their partner. Tell students who choose the third activity that they should include information about the thrill and excitement of their invented sport as well as details about the competition, such as entry requirements, location and the date and time of the event. Invite students to share their completed activities with the class.

Extend

- Put students into pairs. Tell one partner to choose an extreme athlete they've read about and to role-play being that athlete. The other partner interviews the athlete, acting in the role of a spectator who has watched the athlete's performance. Partners take turns as interviewer and interviewee. Encourage students to use their new vocabulary words in their interviews. Partners can share their interviews with the class.

- If time allows, hand out **Worksheet 4.1.2**. Explain that students will use vocabulary words to talk and write about extreme athletes. They will also write about testing their own physical and mental limits.

Consolidate

- Tell students to stand in a circle. Say *I'll say a word. Put your hand up if you know what the word means. I'll pass this (ball) to a person who puts his hand up. He'll say what the word means and then pass the (ball) to another student who will use the word in a sentence.* Keep playing until you have used all the vocabulary words.

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Vocabulary Strategy

Prefix *un-* Explain that the prefix *un-*, means 'not'. When it comes at the beginning of a word, it changes the word's meaning to its opposite. For example, adding the prefix *un-* to the word *believable* makes the word *unbelievable*, which means 'not able to be believed'. Other prefixes that change a word's meaning in the same way are: *in-*, *im-*, *ir-* and *il-*. Note the examples below:

visible	>	invisible
probable	>	improbable
replaceable	>	irreplaceable
legal	>	illegal

About the Photo

The photo shows photojournalist Cory Richards, a National Geographic Photography Fellow.

Teaching Tip

Monitor pairs as they work on their own. Check that students have a correct understanding of vocabulary terms and observe their use of language. Offer assistance when needed.

Formative Assessment

Can students

- identify and use vocabulary to discuss the characteristics of athletes who do extreme sports?

  Ask *What qualities do extreme athletes have that help them overcome obstacles?*

- use new vocabulary to discuss the reasons people do extreme sports and the risks they take?

  Ask *What is one reason that extreme athletes take risks?*

Workbook For additional practice, assign Workbook pages 2–3.

Online Workbook Vocabulary

SPEAKING STRATEGY

Objective
Students will
- show interest in a conversation.

Speaking Strategy Showing interest in a conversation

Academic Language *interest, conversation, topic, maintain, role*

Content Vocabulary *ironing*

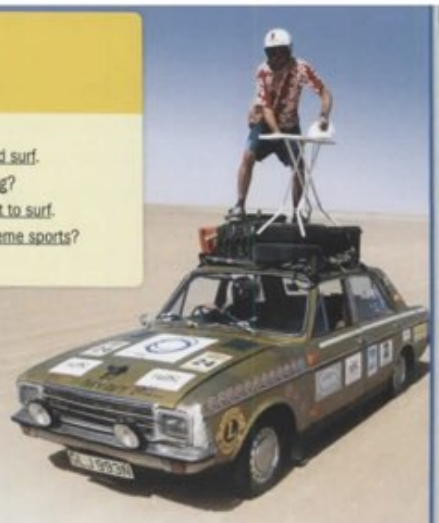
Resources Online Workbook; Worksheet 4.1.3 (Teacher's Resource CD-ROM/ Website); Tracks 006–007 (Audio CD/ Website/CPT); CPT: Speaking Strategy

Materials pieces of card

SPEAKING STRATEGY 006

Showing interest in a conversation

Statement	Responses
I love surfing.	Wow! What's that like?
	Really! I never knew that you could surf.
	What can you tell me about surfing?
	Tell me more about how you learnt to surf.
	What about you? Do you like extreme sports?
	You're a surfer? Me, too!



1 Listen. How do these speakers show interest in the conversation? Write the phrases you hear. 007

2 Read and complete the dialogue.

Possible answers:

Lee: What are you doing, Jon?

Jon: I'm getting ready for my next mountain bike race.

Lee: Really! ___I never knew that___ you raced.

Jon: Yeah, I've been racing for about three years.

Lee: ___Wow! What's that like?___

Jon: It's very cool. ___What about you?___ Do you do any extreme sports?

Lee: Yeah, I like rock climbing. And I'm getting ready for my first extreme ironing competition.

Jon: ___Tell me more about___ what it's like to do extreme ironing.

Lee: I can't yet – I've never done it!

3 Work in pairs. Throw the cube. Make a statement about the topic on the cube. Your partner uses the phrases above to maintain the conversation. Then swap roles.



Go to page 153.

4 Work in groups. Do you take risks? Share stories about risks you have taken. Tell one true story and one false story. See if your group can guess the true story. Use the phrases above to maintain the conversations.

Warm Up

- **Revisit** Say *There are often times when you want to show that you are listening to what another person is saying.* Ask *How can you respond to someone talking about an interesting object that they found?* (Really? Wow! You're joking! Seriously? That's incredible! No way!) Ask *What question can you ask to show that you are interested in a story?* (So what happened then?)

- Tell partners to act out situations in which they show that they are interested in someone talking about a found object or a story. Choose students to act their role plays for the class.

Present 1

- Say *Today we're going to learn about other ways that you can show interest in what a person is saying. You can keep the conversation going.* Tell students to open their books at page 13. Say *We'll listen to one speaker make a statement. Then we'll listen to several ways to respond that show interest.* Play **Track 006.**

- Play **Track 006** again and tell students to read along. Tell students to take turns making a statement and responding to show interest. Supply prompts such as these:

> My favourite outdoor sport is _____.
>
> I didn't know you could _____! What's that like?
>
> I like to go _____ in the winter.
>
> You like to go _____ ? Me, too!

- 1 Say *You're going to listen to two speakers talking. Look at the photo on page 13. The speakers are going to talk about the photo. Write down the words and phrases*

that the speakers use to show interest in the conversation. Play **Track 007**. Ask students to share what they wrote.

Practise 2

- 2 Once students seem comfortable using the speaking strategy, tell them to complete Activity 2 independently.
- Ask students to read their completed dialogues aloud, taking turns as Lee and Jon. Then ask *What words and phrases did you use or hear?*

Apply 3 4

- 3 Put students into pairs. Tell partners to cut out and use the cube on page 153 to role-play showing interest in a conversation. Model with a student. For each cube throw, encourage partners to swap roles and play again.
- **Connect** Say *Now try to think of times that you've taken risks.* Brainstorm types of risks and record them on the board.
- 4 Say *Each student tells one true story and one false story. Your group tries to decide which story is true and which is false. The group maintains the conversation by responding with words and phrases that show interest.*
- Remind students to use their new vocabulary in their stories and to use the phrases in the box on page 13 to maintain their conversations.

Extend

- Put students into groups of three or four. Tell groups to choose a fiction book or a film that at least one group member has read or watched. The student or students who are familiar with the story take turns describing the plot. The students who are not familiar with the book or film make comments to show interest as the speaker tells the story.
- If time allows, hand out **Worksheet 4.1.3**. Explain that students will use the worksheet to show interest in a conversation.

Consolidate

- Write the following sentence frame on the board: *I'm going to enter a _____ competition*. Prepare pieces of card with these words: *dance, skateboarding, swimming, diving, tennis, snowboarding*. Put students into pairs. Hand out one card to each pair. Tell one partner to make a statement using the sentence frame and the word on the card. The other partner uses a response from the speaking strategy box to show interest.
- Say *Role-play showing interest in a conversation.* Model an example. Say *You say 'I'm going to enter a skateboarding competition'. Your partner responds 'Tell me more about how you learnt to skateboard'.* Tell partners to swap roles and show interest using a different response.

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Strategy in Depth

Asking questions and making positive comments are common ways to show interest in a conversation in English. Here are some additional examples:

Statement
I went hang gliding last weekend.

Responses
You did? How was it?
Did you? You're adventurous.
Hang gliding? That's so cool!
I didn't know you could hang glide!
You like hang gliding? So do I!
That must have been fun!
Yes! I remember that you've been hang gliding before.

Related Words

iron, ironing board

Formative Assessment

Can students
- show interest in a conversation?

Say *I'll make a statement and you respond in two different ways that show interest.* Then make a statement such as *I'm going horse-riding this weekend.*

Online Workbook Speaking Strategy

GRAMMAR 1

Objectives

Students will

- identify the form and use of embedded clauses, questions and commands.
- use embedded clauses, questions and commands to talk about physical challenges of extreme sports and other kinds of mental challenges.
- identify and use words associated with facing and overcoming mental challenges.

Grammar Using embedded clauses, questions and commands

Target Vocabulary *events, non-traditional, represent, struggle*

Academic Language *embedded clause, embedded question, embedded command*

Content Vocabulary *complex, regional, ultimate*

Pronunciation Intonation in embedded *yes/no* questions

Resources Online Workbook/Workbook pages 4–5; Tracks 008–011, 113–114 (Audio CD/Website/CPT); CPT: Grammar 1

Materials pieces of card

GRAMMAR 008

Embedded clauses, questions and commands

I think ... Extreme sports are dangerous.	**I think extreme sports are** dangerous.
I wonder ... What obstacles has Cory overcome?	**I wonder what obstacles Cory has overcome.**
Do you know ... Can we climb that mountain in winter?	**Do you know if we can climb** that mountain in winter?
I'm asking you ... Try downhill mountain biking.	**I'm asking you to try** downhill mountain biking.

1 **Work independently.** Listen to the speakers. Then complete the embedded clause, question or command. Remember to change the order of words when necessary. 008

1. She's guessing that skydiving would be amazing.
2. He's wondering what the most dangerous extreme sport is.
3. You're telling me to have a lesson before I go kite surfing.
4. I think that mountain climbers must have endurance.
5. I'm asking you who the most determined person you know is.

2 **Work in pairs.** Make sentences to form embedded clauses, questions and commands. Possible answers:

I wonder	Wear a helmet when you ride your bike.
I think	Had Cory been in an avalanche before?
I'm asking	Teach your brother how to surf.
I'm telling	How many countries has Cory visited?
Do you remember if	You could try ice climbing.

1. I wonder how many countries Cory has visited.
2. I think you could try ice climbing.
3. I'm asking you to teach your brother how to surf.
4. I'm telling you to wear a helmet when you ride your bike.
5. Do you remember if Cory had been in an avalanche before?



14 GRAMMAR

Warm Up

- **Pre-teach** Write the following sentences on the board:

> I think Olympic ice skaters have unbelievable determination.
>
> I wonder how Olympic ice skaters push themselves to their limits.
>
> Do you know if the Olympic ice skaters are competing today?
>
> I'm asking you to watch an Olympic ice-skating event with me.

Read aloud the first sentence. Say *In what other Olympic sports do you think athletes show unbelievable determination?* Ask students to repeat the sentence naming other Olympic sport athletes. (Sample response: I think Olympic ski jumpers have unbelievable determination.) Repeat the process with the other sentences.

3 **LEARN NEW WORDS** **You've learnt about physical challenges.** Now listen and read about a mental challenge. Then listen and repeat. 010 011

A **non-traditional** sport, such as ice climbing, can really push us to our physical limits. But have you ever done anything that pushes you to your mental limits? Around the world, students participate in tough academic competitions, such as Maths Olympiads. These **events** require a lot of training, just as an extreme sport does. The competitions often require students to **struggle** with complex problems. Sometimes it takes over an hour to complete just one!

Nur Muhammad Shafiullah knows first-hand how the Maths Olympiads can push mental limits. He is the youngest student ever to compete in the International Mathematical Olympiad. At 15, Nur Muhammad went to the international competition to **represent** his native country, Bangladesh. He competed against students from 125 countries and took the bronze medal! The next year he did it again. The year after that he earnt a silver medal. Nur Muhammad's maths skills are really unbelievable. What about you? Do you think the International Mathematical Olympiad is beyond your mental limits?



4 **Work in pairs.** Write sentences using the words below. Include an embedded clause, question or command in each sentence.

Possible answers:

1. wonder / time / event I wonder if the event takes much time.
2. guessing / struggle / difficult I'm guessing that you'll struggle with difficult problems.
3. think / student / prepare I think that the student prepared for the competition.
4. telling / non-traditional / sport You're telling me to try a non-traditional sport.
5. asking / represent / country We're asking you to represent our country in the competition.

5 **Work in groups.** Think of other competitions that provide mental challenges. What do you know about them? What questions do you have? Discuss in your group, using embedded clauses, questions and commands as much as possible.

Present

- Point out the examples at the top of page 14. Read aloud the phrase *I think* and the sentence in the left column. Explain that you can combine them in a sentence with an embedded clause to say what you think. Read aloud the sentence in the right column.
- For the second example, explain that you can combine *I wonder* and the question. Say *You need to change the order of the words in the question when you form a sentence with an embedded question.*
- In the third example, point out the change in word order in the verb phrases. Say Can we climb *changes to* we can climb.
- In the last example, explain that you can combine *I'm asking you* and the command into a sentence with an embedded command. Say *When you use an embedded command, you include* to *before the verb. In this example, you need to include* to *before the verb* try.
- Play **Track 008** and tell students to follow along in their books.

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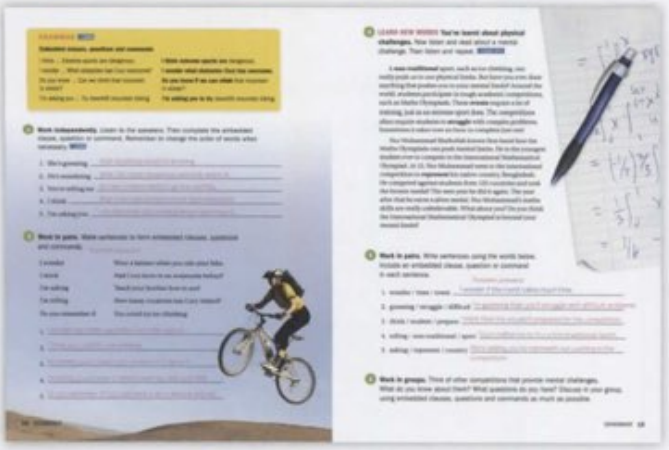
Grammar in Depth

Remind students to change the word order when they embed a question in a sentence or in another question.

What sports events have you watched recently?
I wonder what sports events you have watched recently.
Can we represent our school at the final competition?
Do you know if we can represent our school at the final competition?

Students may also need a reminder to use the infinitive form of the verb (with the word *to*) when they embed a command.

Push yourself as hard as you can.
I'm asking you to push yourself as hard as you can.



Practise 1 2

- 1 Direct students' attention to Activity 1. Say *Now you'll listen to different speakers. Each speaker will make a statement, ask a question or give a command. Complete each item in Activity 1 to make a sentence that has an embedded clause, an embedded question or an embedded command.*

- Say *Let's do item 1 together. Listen to the first speaker.* Play the first sentence on **Track 009**. Ask *What is the speaker guessing in item 1?* (that skydiving would be amazing) Ask a student to complete the sentence in item 1. (She's guessing that skydiving would be amazing.) Explain that it would also be correct to write the sentence without the word *that: She's guessing skydiving would be amazing.*

- Tell students to complete items 2–5 on their own. Remind students that they need to change the order of words when they form a sentence with an embedded question. When students have finished, review answers as a class. Replay the audio for each speaker on **Track 009** and ask students to read their completed answers. Ask *In which items did you need to change the order of words?* (items 2 and 5) Ask *How did you know that you needed to change the order of words in those two items?* (The speaker asked a question.)

- 2 Put students into pairs. Say *Now let's look at Activity 2. You're going to make new sentences with an embedded clause, an embedded question or an embedded command. Use each phrase in the left column to begin a new sentence. Then choose a sentence or question in the right column to complete the new sentence.*

- Tell students to work with their partners to make sentences. After partners have completed the activity, invite them to share their sentences with the class. Review how the order of words changes when students embed the questions *Had Cory been in an avalanche before?* and *How many countries has Cory visited?* in new sentences.

Apply 3 4 5

- 3 **LEARN NEW WORDS** Tell students to open their books at page 15. Direct their attention to Activity 3. Say *You've read about how extreme athletes and adventurers push themselves to their physical limits to achieve their goals. Now you're going to hear about students who push themselves to their mental limits to achieve a different kind of goal.* Play **Track 010**. Tell students to follow along in their books as they listen.

- Point out the four bold words in the paragraphs in Activity 3. Say *You heard some new words. Let's listen to these words in sentences.* Play **Track 011**. Ask students to repeat each word alone and in a sentence.

- 4 Put students into pairs. Tell partners to use the given words in each item to make sentences with embedded clauses, questions or commands. Review the sample answer in item 1. Model another example for students. Say *You could use the words wonder, time and event in a different sentence. For example, you could write* I wonder if the time of the event has been changed. After partners have completed the activity, ask them to share their sentences with the class.

- 5 Put students into groups of three or four. Tell students to read Activity 5. Write *spelling* and *coding competition* on the board. Say *These two types of competitions also involve a mental challenge. Let's brainstorm a few more.* Record responses on the board. Then ask each group to choose a competition and discuss the mental challenges involved in it. Encourage students to say what they know, state opinions and ask questions. Remind them to use embedded clauses, questions and commands in their discussions.

Extend

- Prepare sets of cards for student partners. In the first set, each card has one of the new words: *events, non-traditional, struggle* and *represent.* In the second set, each card has one of the grammar terms: *embedded clause, embedded question* and *embedded command.*
- Put students into pairs. Give each partner a set of cards. Explain that partners each choose one of their cards and work together to make a sentence using the word and the grammar structure.
- Say *For example, (Maria) chooses the card with* events. *(Leo) chooses the card with* embedded command. *(Maria) and (Leo) work together to come up with a sentence that uses the word* event *in an embedded command. They write the sentence* We're asking you to go to some extreme sporting events. Tell partners to use their cards to write as many different sentences as they can.

Consolidate

- Write the following on the board:

She/He thinks ...	She/He's guessing ...
She/He's telling you ...	She/He's asking you ...
She/He's wondering ...	

- Prepare cards with statements, questions and commands such as the following:

  People set their own physical and mental limits.
  Climbing mountains in the winter is hazardous.
  What kinds of risks have extreme athletes taken?
  Which obstacles have been the easiest to overcome?
  Attend the special events at the library next week.
  Try some non-traditional foods at the school fair.

- Put students into pairs and hand out one card to each pair. Say *Your partner reads the statement, question or command on your card. Then you say a sentence with the statement, question or command embedded in it. Use the phrases on the board to begin your sentences.*
- Model an example. Say *Your partner reads 'What kinds of risks have extreme athletes taken?' You respond 'She's wondering what kinds of risks extreme athletes have taken'.* Tell partners to swap roles and try to vary their responses.

BE THE EXPERT

Teaching Tip

Remind students about proper listening behaviour when working together. Make eye contact with your listeners, pay attention when someone else is speaking and wait until another person has finished speaking before sharing your own ideas.

Pronunciation

Go to Student's Book page 144. Use Audio Tracks 113 and 114.

Intonation in embedded *yes/no* questions Intonation is the way we use our voice when speaking. For British English speakers, there is typically a rising intonation at the end of *yes/no* questions and a falling intonation at the end of statements and *wh-* questions.

With embedded questions, the intonation is determined by the sentences with the embedded question.

- If it's a statement, then the intonation falls for embedded *yes/no* questions. Statements often begin with: *I wonder ..., I'm asking..., I don't know ..., I'm not sure ...*
- If it's a question asking for a yes or no answer, then the voice rises. Questions often begin with: *Do you know ..., Are you asking ..., Did you ask ...*

Formative Assessment

Can students

- identify the form and use of embedded clauses, questions and commands?

  Ask students to identify which sentence has an embedded clause, question or command.

  Which sport has the most hazardous conditions? / He's wondering which sport has the most hazardous conditions.

- use embedded clauses, questions and commands to talk about physical challenges of extreme sports and mental challenges?

  Ask students to use groups of words to make a sentence with an embedded clause, question or command: asking / mountains / climb

Workbook For additional practice, assign Workbook pages 4–5.

Online Workbook Grammar 1

READING

Objectives

Students will

- describe how an athlete overcame physical challenges to excel in her sport.
- identify and use new words in the reading.
- summarise information in an article using their own words.

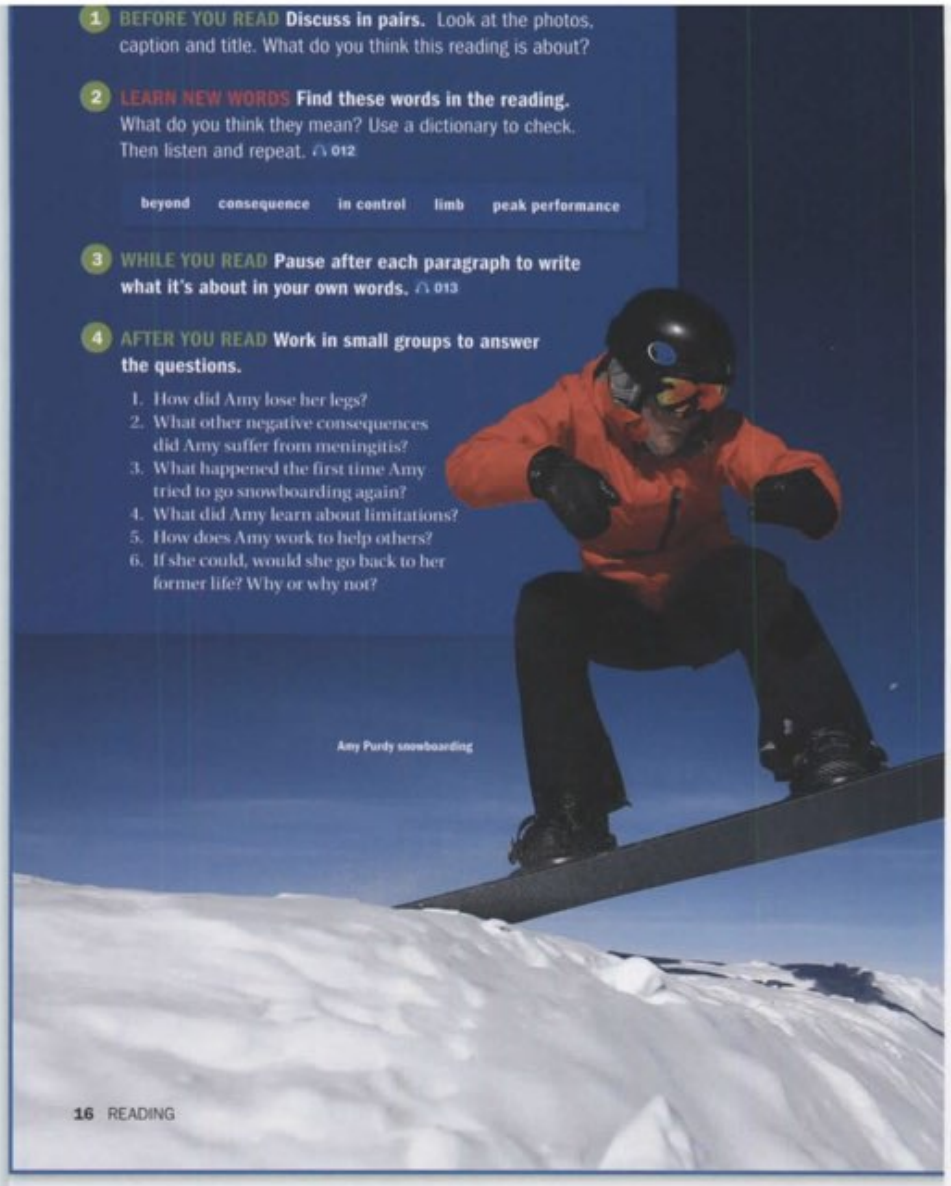
Reading Strategy Summarise

Vocabulary Strategy Using a dictionary

Target Vocabulary *beyond, consequence, in control, limb, peak performance*

Content Vocabulary *artificial, celebrity, kidney, limitations, world-class*

Resources Online Workbook/ Workbook pages 6–7; Worksheet 4.1.4 (Teacher's Resource CD-ROM/ Website); Tracks 012–013 (Audio CD/Website/CPT); CPT: Reading; Graphic Organisers: Note-taking table, 5 for each student; T-chart *(optional)* (Teacher's Resource CD-ROM/Website)



1 BEFORE YOU READ **Discuss in pairs.** Look at the photos, caption and title. What do you think this reading is about?

2 LEARN NEW WORDS **Find these words in the reading.** What do you think they mean? Use a dictionary to check. Then listen and repeat. 012

beyond consequence in control limb peak performance

3 WHILE YOU READ **Pause after each paragraph to write what it's about in your own words.** 013

4 AFTER YOU READ **Work in small groups to answer the questions.**

1. How did Amy lose her legs?
2. What other negative consequences did Amy suffer from meningitis?
3. What happened the first time Amy tried to go snowboarding again?
4. What did Amy learn about limitations?
5. How does Amy work to help others?
6. If she could, would she go back to her former life? Why or why not?

Amy Purdy snowboarding

16 READING

Warm Up

- **Activate prior knowledge** Say *We've talked about extreme athletes and adventurers and the challenges they faced. Let's list some of these athletes and adventurers and their sports.* Draw a T-chart on the board. Label one column *Athlete/Adventurer* and the other *Sport*. Write *Tommy Caldwell* in the left column. Ask *Do you remember which sport Tommy Caldwell does?* (free climbing) *What other athletes and adventurers have you learnt about? What sport do they do?* (Jussi Oksanen, extreme snowboarding; Koa Rothman, big-wave surfing; Cory Richards, extreme mountain climbing) Record responses in the chart.

- Ask *What other extreme athletes or adventurers do you know about?* Record in the chart any additional athletes/adventurers and their sports that students mention. Say *Now you're going to read and learn about another athlete who faced especially difficult challenges.*

No Limits



AMY PURDY SEES HER LIMITATIONS AS A GIFT THAT HAS HELPED HER DO AMAZING THINGS.

Amy Purdy is a world-class athlete, model and actress. She has achieved amazing success in her life and hasn't let anything slow her down – even the loss of both legs! In fact, some of Amy's greatest achievements came after she lost them.

When Amy was 15, she started snowboarding. After finishing high school, she moved to the mountains, where she could easily spend her free time snowboarding. She felt totally in control of her life. But then at 19, she contracted meningitis, a horrible disease that left her with only a two per cent chance of survival. Amy survived, but there were terrible consequences. She lost a kidney, the hearing in her left ear, and both legs below the knees.

For a long time Amy felt depressed. But when she closed her eyes, she could still see herself snowboarding. She decided not to let this situation take over her life. By the time she was 21, she was back on her board, wearing artificial legs she had built herself. The first time she tried to use them, she fell off, but her legs kept going down the hill without her! After a few years of hard training using her new legs, Amy was able to reach her peak performance level. She became the Para-Snowboarding World Champion in 2012, and she later won the bronze medal in the 2014 Paralympic Games.

Amy's new life was beyond what she expected. Suddenly, she had become a celebrity, a fashion model and an actress. She was even on the popular American TV programme *Dancing with the Stars*. Most importantly, she started helping people like her to do the sports they love. She started a company that makes artificial limbs, and she created an organisation that introduces people with physical disabilities to action sports.

Now, if you ask Amy, 'Would you want to change your situation?', she would say no. Losing her legs has enabled, not disabled, her. According to Amy, 'It's facing our fears head on that allows us to live our lives beyond our borders.'





5 **Work in pairs.** Re-read the text. Then without looking, take turns saying what you remember. Use your own words.

6 **Discuss in groups.**

1. How did getting meningitis impact Amy's life? Identify positive and negative impacts.
2. Do you agree that disadvantages can become advantages? Explain.
3. Do you think anyone can overcome an obstacle like Amy has? Why or why not? Give examples.

Before You Read 1 2

- 1 Tell students to open their books at pages 16–17. Put students into pairs. Say *Look at Activity 1. With your partner, look at the reading's photos, title and the introductory text. Discuss what you think the reading will be about.* When students are ready, invite partners to describe their predictions for the class.
- Say *A limitation is something that holds you back.* Ask *Do the photos give you any hint about what Amy Purdy's limitations might be?* Students may mention that Amy's legs and feet in the photo on page 17 appear to look different. Ask *How might this connect to the reading's title* No Limits *and the photo of the snowboarder on page 16?*
- 2 **LEARN NEW WORDS** Say *Now you're going to learn some new words and phrases in the reading.* Point to the phrase *in control* in the middle of the second paragraph. Say *Here's the phrase* in control. Read the sentence aloud. Ask *What do you think the meaning of* in control *is in this sentence?* (able to manage)

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Reading Strategy

Summarise Asking students to summarise information in their own words helps them better understand and remember what they have read. When students stop to pause and think about what they have just read, they are able to make sense of the text. Talking or writing about what they have read in a text helps students process the meaning of the text and supports comprehension.

Vocabulary Strategy

Using a dictionary Dictionaries typically offer multiple meanings of a word. To know which meaning is wanted, tell students to focus on the context. For example, the word *performance* can refer to an activity (such as playing music) that is done to entertain an audience or it can refer to how well a person does something.

About the Photo

The large photo shows Amy Purdy snowboarding during a training session in 2013 in Copper Mountain, Colorado, in the United States. Purdy is a member of the U.S. Paralympics Snowboarding National Team.

Teaching Tip

Pair or group students in a variety of ways so that students do not always work with the same partner or group. Consider pairing or grouping students alphabetically by name, by a shared interest, such as a favourite sport or by the season in which they were born. Use different arrangements so that students have the opportunity to work with all of their classmates.

Related Words

goggles, helmet



- Next, point to the word *consequences* in the second-to-last sentence of the paragraph. Say *Here's the word consequences.* Read the sentence aloud. Say *Sometimes it's helpful to read ahead in order to work out a word's meaning.* Read aloud the next sentence. Explain that a *kidney* is an important part inside our bodies. Ask *What do you think consequences means?* (things that happen as a result of something else)

- Point out *peak performance* in the third paragraph. Ask students to read the sentence it's in, as well as the following sentence, to work out the phrase's meaning. Then point out the words *beyond* and *limbs* in the fourth paragraph. Ask students to read the paragraph and work out their meanings. If students struggle with the meaning of *limbs*, explain that *artificial* means 'fake' and direct their attention to the photo of Amy on page 17. Tell students to check their word meanings in a dictionary.

- **Vocabulary Strategy** Explain that dictionaries often give more than one meaning. Say *If the word has multiple definitions, don't read just the first one. Find the definition that makes the most sense in the context where you found the word. Read the examples in the dictionary. The context of the examples can help you decide which definition to choose.*

- Next, tell students to listen to **Track 012** and repeat.

While You Read 3

- 3 Say *Now we're going to learn more about Amy Purdy.* Play **Track 013** and tell students to read along.

- Explain that Amy Purdy built her own artificial legs because she couldn't find any that she could use for snowboarding. Say *Now listen and read again. I'll pause the recording after each paragraph. Write what the paragraph is about in your own words. Then continue listening and reading. After each paragraph, you'll write what the paragraph is about.* Hand out five note-taking table graphic organisers to each student. Tell students to use a separate table to write about each paragraph. Remind them to include important information. Play **Track 013** again. Tell students to read along. Pause the audio after each paragraph to give students time to write.

After You Read 4 5 6

- 4 Put students into groups of three or four. Tell groups to read the questions and answer them. If students disagree on an answer, tell them to go through the text again to find support for their answers.

- 5 Put students into pairs and tell them to re-read the text on page 17. Then tell them to close their books, and say *Without looking back at the text, use your own words to summarise for your partner what the reading is about. Try to include the important information. Then your partner will summarise the reading for you in his or her own words.* Tell partners to summarise the article for each other.

- When partners have finished, tell them to look back at the writing on their graphic organisers. Ask *Is there any other important information that you would like to include in your summary?* Tell students to review the paragraphs they wrote and identify any additional information.

- 6 Tell students to form groups of three or four to answer the activity questions. Tell one student in each group to act as secretary and note information from the discussion.

- When discussions have finished, say *Now let's have a look at what you've discussed.* Draw the following table on the board. Include a row for each group.

Group	Impact of Amy's meningitis		Disadvantages can become advantages.		Overcome obstacle	
	Positive	Negative	Agree	Disagree	Anyone	Not everyone
A	reached peak level	lost kidney, hearing in left ear and two lower legs	✓✓✓	✓	✓ Brother broke arm but still learnt to ride a bike. ✓ Cousin with low grades became spelling champion.	✓ Uncle with injured leg no longer able to drive. ✓ Sister in secondary school failed to get into university.

- Invite group secretaries to report the information from their discussions. As they do, fill in the table for each group. Make observations about the information in the table. For example, say *Most students in Group (A) agree that disadvantages can become advantages.* Point out a few different examples about overcoming obstacles. For each, ask *Do you think the person faced a physical or mental challenge with this obstacle?*

- Leave the table on the board if you plan to do the first Extend activity.

Extend

- Say *Work with a partner. Choose two examples in the table about people who did or did not overcome an obstacle. Talk about the steps each person might have taken to meet their challenge.* Tell partners to list and talk about their ideas. You may want to provide a T-chart graphic organiser for students to list ideas.

- If time allows, you may want to hand out **Worksheet 4.1.4** in class. Hand out a copy to each student. Say *Look carefully at the new words on page 16. You will use your new words to answer questions. Then you will create new words based on what you know about word forms.*

Consolidate

- Say *Write a paragraph about a personal challenge you have faced in your own life. Include any obstacles you faced and how you were able to overcome them or not.* Allow students time to write their paragraphs. When students have finished writing, invite volunteers to share their paragraphs with the class.

BE THE EXPERT

Teaching Tip

Help students manage their time more effectively by letting them know in advance the amount of time you expect an activity to take. Whether they work individually, with a partner or as part of a group, make sure you tell them how much time is available to complete the task.

Answer Key 4

Comprehension

1. She contracted meningitis.
2. She lost a kidney and the hearing in her left ear.
3. She fell off, but her legs kept going down the hill without her.
4. Answers will vary.
5. She started a company that makes artificial limbs and she created an organisation that introduces people with physical disabilities to action sports.
6. No. She believes that losing her legs has enabled, not disabled, her.

Formative Assessment

Can students

- describe how an athlete overcame physical challenges to excel in his/her sport?

  Ask students to describe in their own words two things they learnt about Amy Purdy.

- identify and use new words in the reading?
- summarise information in an article using their own words?

  Ask students to use *in control, consequences, peak performance, beyond* or *limb* in a sentence about Amy Purdy.

Workbook For additional practice, assign Workbook pages 6–7.

Online Workbook Reading

VIDEO

Objectives
Students will
- discuss the positive aspects of uncomfortable experiences.
- apply the message of the video to their personal lives.

Academic Language *preview, observe, positives*

Content Vocabulary *discomfort, richness, tribute*

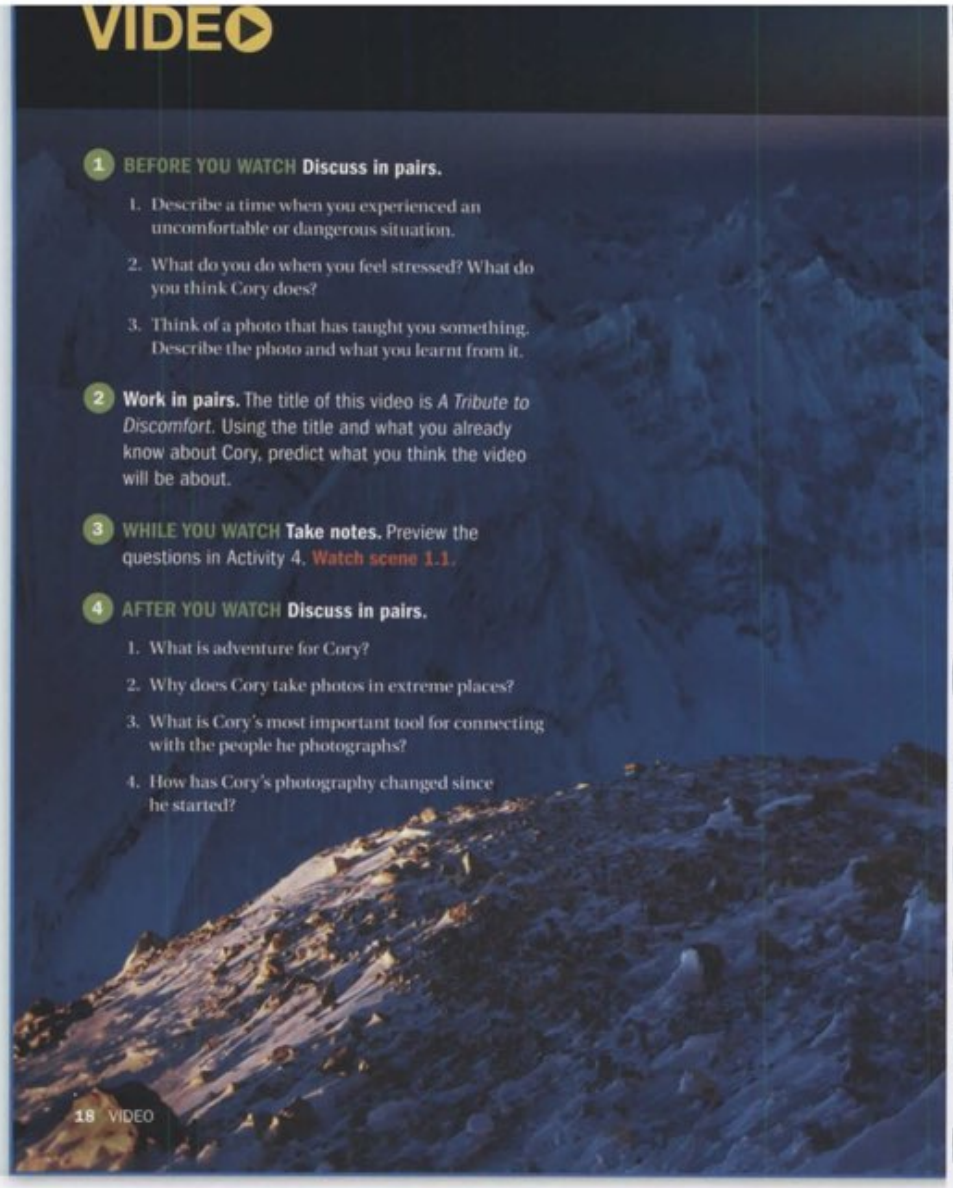
Resources Video scene 1.1 (DVD/Website/CPT); Online Workbook; CPT: Video; Graphic Organisers: Note-taking table *(optional)*; Two-circle Venn diagram *(optional)* (Teacher's Resource CD-ROM/Website)

Materials photos with personal meaning that students bring from home *(optional)*

Answer Key 4

Comprehension

1. anything that puts us outside our comfort zone
2. to tell a story of what it means to hurt, to triumph and to be human
3. making people laugh
4. At first, he communicated what he was experiencing. Now he communicates what we are experiencing.

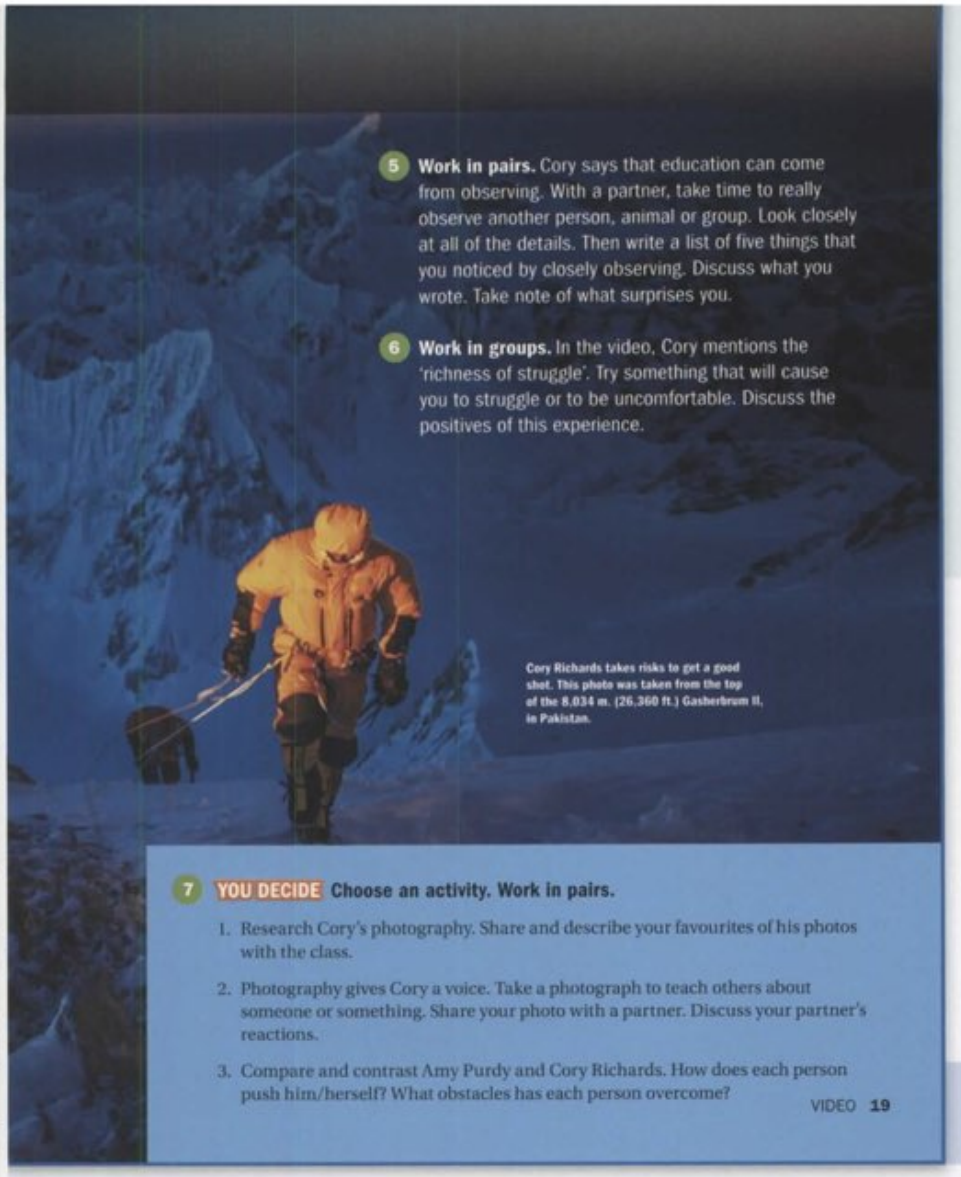


Before You Watch 1 2

- Tell students to re-read the paragraphs on page 12 about Cory Richards. Say *Cory has tested his physical and mental limits in order to take unbelievable photographs. This often puts him in difficult and dangerous situations.*
- 1 Put students into pairs. Ask a student to read items 1–3 aloud. Say *Take turns giving descriptions and asking and answering the questions.* If students have brought in their own photos, tell them to use the photos for item 3. If not, tell students they can look for photos in their Student's Books. If time allows, invite students to share their answers and photos with the class.
- 2 Put students into pairs. Say *Look at the photo on these pages. Then think about the video's title and what you know about Cory Richards. Use this information to predict what you think the video will be about.* After partners have discussed their predictions, invite several students to share their predictions with the class.

While You Watch 3

- 3 Point out and read aloud questions 1–4 in Activity 4. Say *Watch and listen for answers to these questions in the video.*
- Hand out copies of the Note-taking table graphic organiser or tell students to make notes in their notebooks. Say *Make notes while you watch the video. Your notes will help you remember what you see and hear. You'll use your notes to answer the questions in the next activity.* Play **Video scene 1.1**.



5 **Work in pairs.** Cory says that education can come from observing. With a partner, take time to really observe another person, animal or group. Look closely at all of the details. Then write a list of five things that you noticed by closely observing. Discuss what you wrote. Take note of what surprises you.

6 **Work in groups.** In the video, Cory mentions the 'richness of struggle'. Try something that will cause you to struggle or to be uncomfortable. Discuss the positives of this experience.

Cory Richards takes risks to get a good shot. This photo was taken from the top of the 8,034 m. (26,360 ft.) Gasherbrum II, in Pakistan.

7 YOU DECIDE **Choose an activity. Work in pairs.**

1. Research Cory's photography. Share and describe your favourites of his photos with the class.
2. Photography gives Cory a voice. Take a photograph to teach others about someone or something. Share your photo with a partner. Discuss your partner's reactions.
3. Compare and contrast Amy Purdy and Cory Richards. How does each person push him/herself? What obstacles has each person overcome?

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About the Photo

This photo taken by Cory Richards appears as a still photograph in the video *A Tribute to Discomfort*. The photo shows mountaineers climbing 8,034-metre (26,360-foot) Gasherbrum II at sunset. Gasherbrum II, located in Pakistan, is part of the Himalayan mountain range and is the world's 13th highest mountain. In the video, Cory Richards describes the avalanche he experienced on this mountain.

Formative Assessment

Can students

- discuss the positive aspects of uncomfortable experiences as a result of watching the video?

  Say *Cory Richards took a photograph of himself immediately after he survived a dangerous avalanche.* Ask *What's a positive thing that came out of Cory's experience?*

- apply the message of the video to their personal lives?

  Ask students to identify something positive they gained from a time they were in an uncomfortable situation.

Online Workbook Video

After You Watch 4 5 6 7

- 4 Tell partners to use their notes to answer Questions 1–4. Ask several pairs to share their answers with the class.
- 5 Read aloud Activity 5. Put students into pairs and tell them to choose a person, animal or group to observe. You can do this activity in class and tell students to closely observe one another. If time and circumstances allow, you may want to either take students to a different part of the school to observe people or groups or tell them to go outside to observe people or animals in nature.
- 6 Put students into small groups. Brainstorm difficult or uncomfortable situations as a class. Say *Building a house of cards is a difficult task. What other tasks can you think of?* Make a list on the board. Ideas may include writing and performing a song, a play or a rap for the class (in English) or reading a difficult poem or text. Once students have chosen and tried an activity, tell them to talk in their groups about its benefits. Invite several groups to share the positive aspects of their experiences.
- 7 YOU DECIDE Ask students to choose an activity. If partners choose to research Cory's photography, tell them to consider creating a multimedia presentation, such as a slide show.
- If partners choose to take their own photographs, remind them to swap roles as they share and discuss reactions to the photos.
- If partners choose to compare and contrast Amy Purdy and Cory Richards, tell them to use a Venn diagram graphic organiser to describe their similarities and differences.

GRAMMAR 2

Objective
Students will
- add emphasis to talk about likes and dislikes.

Grammar Adding emphasis

Academic Language *emphasis*

Content Vocabulary *snow kiting, tae kwon do, yoga*

Resources Online Workbook/ Workbook pages 8–9; Worksheet 4.1.5 (Teacher's Resource CD-ROM/ Website); Track 014 (Audio CD/ Website/CPT); CPT: Grammar 2

Materials pieces of card *(optional)*

GRAMMAR 014

Adding emphasis

My sister loves hiking in the Himalayas.
The place (where) my sister loves hiking **is** the Himalayas.

I won't go surfing. I don't like swimming in the sea.
The reason (why) I won't go surfing **is that** I don't like swimming in the sea.

He loves yoga because it makes him feel relaxed.
The thing (that) he loves about yoga **is that** it makes him feel relaxed.

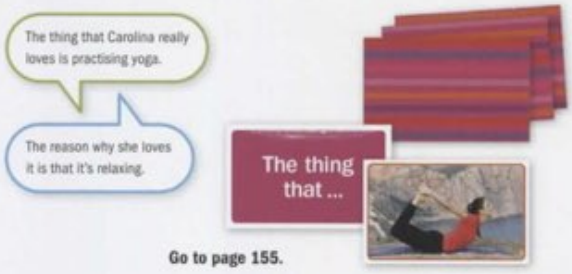
I like snow kiting. It pushes me to my physical limits.
What I like best about snow kiting **is that** it pushes me to my physical limits.

1 **Read.** Then rewrite the sentences to add emphasis.

Possible answers:

1. I prefer snowboarding to skiing because I need less equipment.
   The reason why I prefer snowboarding is that I need less equipment.
2. José really enjoys climbing in the Andes.
   The place where José really enjoys climbing is the Andes.
3. I love the excitement of kite surfing.
   The thing I love about kite surfing is the excitement.
4. Maria likes trying extreme sports.
   The person who likes trying extreme sports is Maria.
5. You should try *tae kwon do*. It really helps you focus.
   The reason why you should try *tae kwon do* is that it really helps you focus.

2 **Work in pairs.** Take turns choosing cards from each pile. Discuss the sport pictured on your card. Add emphasis.



Go to page 155.

Warm Up

- **Build background** Say *Sometimes we want to give special importance to something we say. We want to focus attention on a particular part of what we are saying. One way to do this is to add emphasis. We're going to learn to add emphasis to what we say. We'll talk about sports and activities and emphasise what we like or dislike about them.*

Present

- Write the following sentences on the board: *I like to go cycling on the path by the river. The place where I like to go cycling is on the path by the river.* Point to each sentence as you read it aloud. Say *The second sentence gives special importance to the place. It adds emphasis to the place where I like to go cycling.* Underline the phrase *The place where*. Say *The sentence begins with the phrase* The place where *to show that the place is what's important.*
- Tell students to open their books at page 20. Direct their attention to the grammar box at the top of the page. Say *You're going to listen to one or two sentences. Then you'll hear another sentence that adds emphasis to talk about the same thing.* Play **Track 014** and tell students to follow along in their books.
- Write the following sentence frames on the board:

> The place (where) _____ is _____.
> The reason (why) _____ is that _____.
> The thing (that) _____ is _____.
> What I like best about _____ is that _____.

- Point to the beginning phrases. Say *You begin a sentence with these phrases to add emphasis. The words in brackets are not always needed.*

- Play **Track 014** again and tell students to listen as they read along.
- Then add the following two sentence frames to the board: *The day/time when _____ is _____. The person who _____ is _____.* Model an example for each. Say *Here are two more phrases you can use to add emphasis. If I say* The day when I am going fishing is Tuesday next week, *what am I adding emphasis to?* (the day) *If I say* The person who taught me to ski is my cousin Mike, *what am I adding emphasis to?* (the person)

Practise 1

- 1 Ask a student to read aloud item 1 and the given answer. Then tell students to complete items 2–5. Review answers as a class.
- Invite several students to use the sentence frames on the board to make a statement about a sport or activity they like.

Apply 2

- 2 Put students into pairs. Tell partners to cut out the cards on page 155 and make two piles: photo cards and phrase cards. Say *Turn over a picture card and a phrase card. Use the phrase to make a statement about the sport or activity in the picture. Make a statement that adds emphasis. Then your partner turns over a phrase card and makes another statement with added emphasis about the picture.* Invite two students to read the model dialogue in the speech bubbles.

Extend

- If time allows, prepare a set of cards with the following:

> a person you enjoy spending time with and why you enjoy spending time with the person
>
> a place you plan to visit and why you plan to visit the place
>
> a weekend activity you like to do and a thing you like about doing the activity

- Put students into pairs. Hand out one card to each pair. Tell students to choose one option on the card and make statements that add emphasis.
- To conclude, hand out **Worksheet 4.1.5**.

Consolidate

- Provide a list of sports and activities for students such as the following: *gymnastics, volleyball, hiking, ice-skating, kayaking* and *cross-country skiing*. Tell them to choose one and add emphasis to say what they like or dislike about it. Say *For example, (Ming) might say,* The reason I love gymnastics is that it helps you keep fit. *(Ricardo) might say,* The thing that I dislike about ice-skating is being out in the cold.

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Grammar in Depth

In place of a simpler one-clause sentence, a more emphatic two-clause sentence can be used to add emphasis. The first clause can emphasise different things. For example, the sentence *I really like swimming in rivers* can have emphasis added in these ways:

> *What I really like is swimming in rivers.*
> *The thing (that) I really like is swimming in rivers.*
> *The place (where) I really like swimming is in rivers.*

It is uncommon and unnatural to begin the first clause with a *wh-* word other than *what*. A noun usually precedes other words that answer *wh-* questions (*who, where, when, why*): the thing that, the person (who), the place (where), the day/time (when), the reason (why). The *wh-* word can be omitted in most of these cases.

The grammar topic in the Student's Book is *wh*-cleft sentences. *It*-cleft sentences are also commonly used to add emphasis or make a contrast. Their grammar construction follows this pattern: *It* + *to be* + noun + clause. For example, *It is me who said that.*

Formative Assessment

Can students

- add emphasis to talk about likes and dislikes?

Say *Think about what you like or dislike about swimming. Make a statement that adds emphasis.*

Workbook For additional practice, assign Workbook pages 8–9.

Online Workbook Grammar 2

WRITING

Objectives
Students will
- identify elements of writing a biography.
- use expressions that connect ideas.
- analyse a model of biographical writing.
- write a biography of an athlete who is a role model for others.

Writing Biography

Academic Language *phases, organise*

Content Vocabulary *artificial, confidence, land mine, marathon, track, victim, volunteer*

Resources Online Workbook/Workbook page 10; Process Writing Worksheets 1–5, Genre Writing Worksheet: Biography (Teacher's Resource CD-ROM/Website); CPT: Writing

Materials pieces of card

WRITING

A biography tells the story of a person's life. Here are some useful words and phrases to connect ideas when writing a biography:

afterwards	**at first**	**eventually**
later on	**more recently**	**ultimately**

1 **Read the model.** Work in pairs to study the writing model. What words does the writer use to organise the biography? Underline them.

Yuko Arimori is an Olympic marathon runner. She was born in Japan in 1966. At first, Arimori had difficulty walking because of a problem with her legs. Other children made fun of her. Her gym teacher helped her to gain confidence, and Arimori learnt to try new things such as track running. Through hard work, she became one of the best high school runners in her city.

Eventually, Arimori tried to join a top track team in Japan. When a spot opened for a marathon runner, Arimori saw her chance. She had never been fast, but speed wasn't as important as endurance, which Arimori had. Ultimately, she became one of the best female marathon runners in the world. In 1992, at the age of 26, she participated in the Barcelona Olympics, where she won the silver medal. Afterwards, in the 1996 Olympics, Arimori won the bronze.

Later on, in 1998, Arimori decided to go beyond just running. She started Hearts of Gold, a volunteer organisation to help land mine victims in Cambodia. Hearts of Gold sponsors the Angkor Wat International Half Marathon. Runners from around the world compete to raise money to buy artificial limbs for those who lost arms and legs because of land mines. In fact, many of the victims join the race!



More recently, Arimori was a United Nations Goodwill Ambassador. Today, she's the President and CEO of Special Olympics Nippon. She continues to help people in Cambodia and other parts of the world.

2 **Work in pairs.** Identify four phases of Yuko's life.

3 **Write.** Write a biography of an athlete who is a role model for others. Use the words and phrases above to help you organise the biography.

Warm Up

- **Build background** Say *A biography tells us about a person's life. It includes dates and events that happened in the person's life. It tells us about important things that happened to the person and about important things that the person did.*

- Put students into pairs. Hand out pieces of card to each student. Say *You and your partner are going to write a few biographical sentences about each other. First, write two or three facts about yourself on a card. Include dates and important events in your life. Then swap cards with your partner. Use your partner's card to write two or three sentences about your partner's life.* Allow partners time to write their sentences.

- Invite students to share their biographical sentences with the class. Point out examples of dates and important events. For example, say *(Tomas) wrote that (Mario) was born in 2002. (Mario) wrote that (Tomas) and his family moved to a new town when Tomas was seven years old.*

Present

- Say *When you write a biography, you talk about the events in a person's life in the order that the events happened. We're going to learn some words and phrases that you can use to describe when events happened. These words and phrases can also be used to link events together.* Write the following on the board:

afterwards	at first	eventually
later on	more recently	ultimately

- Point to the board and say *You can use these words and phrases as you write to help you organise the events in a person's life.* Ask *Which phrase would you*

use to talk about an earlier event? (at first) Point out the words *afterwards* and *later on*. Say *Use these words to write about events that happened after another event.* Underline *eventually, ultimately* and *more recently*. Say *Use these words to talk about events that happened at later times.* Eventually *means 'at some later time'.* Ultimately *means 'at the end of a period of time'.* More recently *means 'during the period of time that has just passed'.*

- Tell students to open their books at page 21. Ask a student to read aloud the text in the green box at the top of the page.

Read the Model 1 2

- 1 Say *Now we're going to look at an example of a biography. First let's look at the photo. Who do you think the biography might be about?* (Students' responses may include the woman or the child.)
- Read the instructions aloud. Say *Look back at the words and phrases in the green box at the top of the page if you need to.*
- Tell partners to underline words and phrases that the writer uses to organise and connect ideas in the biography. (*At first, Eventually, Ultimately, Afterwards, Later on, More recently*)
- 2 Say *Read the text again. Find out who the biography is about. Read about important events in the person's life and when the events happened.*
- After students have finished reading, you may wish to provide more information. Say *Yuko Arimori was the first woman marathon runner to win an Olympic medal for Japan. Hearts of Gold, the organisation she founded, supports people around the world who have become handicapped as a result of war.* Explain that a *land mine* is a type of bomb placed in the ground that explodes when a person walks near it or steps on it. Tell students that land mines cause severe injuries, including loss of limbs. You may also wish to explain that many land mines still remain in Cambodia.
- Next, tell students to work in pairs to discuss the text. Say *A phase is a length or period of time. Identify four phases in Yuko's life. Use the words and phrases that you underlined to help you. Remember that the writer uses these words and phrases to organise the biography.*
- Allow students time to complete their discussions. Invite partners to describe the four phases in Yuko's life. (runner during her school years in Japan; marathon runner/Olympic medal winner; founder of an organisation that helps Cambodian land mine victims/sponsor of a fund-raising marathon; United Nations Good Will Ambassador/CEO of Special Olympics Nippon)
- **Worksheet** If your students need a reminder of the elements of the Biography genre, you may want to hand out **Biography Genre Writing Worksheet** and review it together.

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Writing Support

Usage Words and phrases such as *afterwards, at first, eventually, later on, more recently* and *ultimately* are commonly used to signal a chronological order of events. These words and phrases also serve as a way to contrast events. For example, consider the meanings of *at first* ('at the beginning') and *more recently* ('having happened a short time ago'). Used together, these two phrases can indicate not only a contrast in time between two events, but also a contrast in the type of action or event that occurred.

At first, John showed no interest in sports.
More recently, John has joined a swimming team and practises regularly.

Workbook For scaffolded Writing support, assign Workbook page 10.

Online Workbook Writing



WRITING

A biography tells the story of a person's life. Here are some useful words and phrases to connect ideas when writing a biography:

afterwards	at first	eventually
later on	more recently	ultimately

1 **Read the model.** Work in pairs to study the writing model. What words does the writer use to organise the biography? Underline them.

Yuko Arimori is an Olympic marathon runner. She was born in Japan in 1966. At first, Arimori had difficulty walking because of a problem with her legs. Other children made fun of her. Her gym teacher helped her to gain confidence, and Arimori learnt to try new things such as track running. Through hard work, she became one of the best high school runners in her city.

Eventually, Arimori tried to join a top track team in Japan. When a spot opened for a marathon runner, Arimori saw her chance. She had never been fast, but speed wasn't as important as endurance, which Arimori had. Ultimately, she became one of the best female marathon runners in the world. In 1992, at the age of 26, she participated in the Barcelona Olympics, where she won the silver medal. Afterwards, in the 1996 Olympics, Arimori won the bronze.

Later on, in 1998, Arimori decided to go beyond just running. She started Hearts of Gold, a volunteer organisation to help land mine victims in Cambodia. Hearts of Gold sponsors the Angkor Wat International Half Marathon. Runners from around the world compete to raise money to buy artificial limbs for those who lost arms and legs because of land mines. In fact, many of the victims join the race!

More recently, Arimori was a United Nations Goodwill Ambassador. Today, she's the President and CEO of Special Olympics Nippon. She continues to help people in Cambodia and other parts of the world.

2 **Work in pairs.** Identify four phases of Yuko's life.

3 **Write.** Write a biography of an athlete who is a role model for others. Use the words and phrases above to help you organise the biography.

WRITING 21

Plan 3

- 3 Read Activity 3 aloud. Say *Now you're going to plan your writing. The first step in pre-writing is to choose a topic. You'll need to decide which athlete to write about. Choose an athlete who is a role model for others. You could choose one of the athletes you've learnt about in this unit or you could choose another athlete you know. Do research on your athlete.*
- Tell students to use the Internet to research their athletes. Tell them to look for information about the main events in their athletes' lives and the order in which the events happened. Remind students to identify the reason their athletes are role models.
- If you have time in class, allow students to work on this step. If not, assign it as homework. If students have Workbooks, remind them to use Workbook page 10 for writing support.
- **Worksheets** If your students need a reminder of any of the steps of process writing, hand out **Process Writing Worksheets 1–5** and review together.
- **Workbook** Refer students to Workbook page 10 to help them organise and plan their writing.

Write

- After students have finished their pre-writing, tell them to work on their first drafts. If you don't have enough time for students to complete the first draft in class, assign it as homework.

Revise

- After students have finished their first drafts, tell them to review their writing and think about their ideas and organisation. Tell each student to consider the following: *Is it easy to identify the role model? Are the events in the person's life described in order? Are the events connected in a clear and logical way? What seems good? What needs more work?*

Edit and Proofread

- Tell students to consider elements of style, such as sentence variety, parallelism and word choice. Then remind them to proofread for mistakes in grammar, punctuation, capitalisation and spelling.

Publish

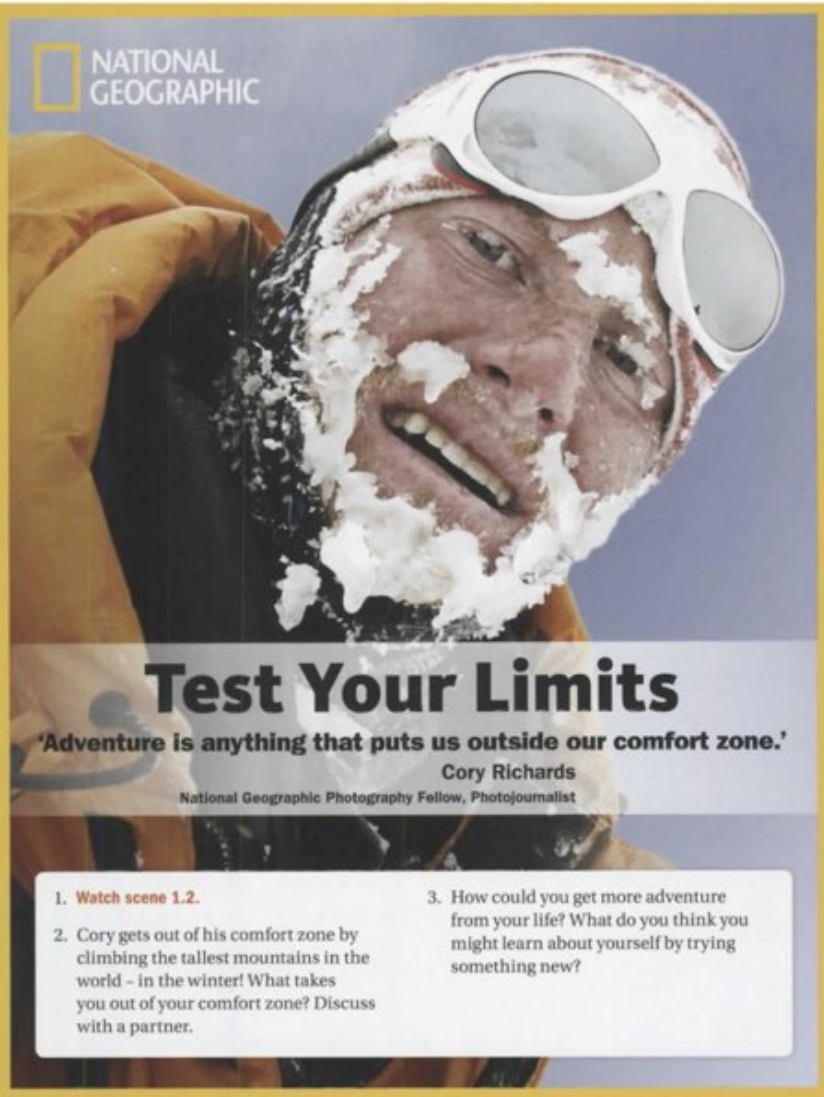
- Publishing includes handing in pieces of writing to the teacher, sharing work with classmates, adding pieces to a class book, displaying pieces on a classroom wall or in a hallway and posting on the Internet.

Writing Assessment

Use these guidelines to assess students' writing. You can add other aspects of their writing you'd like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

	1	2	3	4
Writing Student organises the phases of the person's life in a logical way. Student uses appropriate words and phrases to organise the biography, such as *afterwards, at first, eventually, later on, more recently* and *ultimately*.				
Grammar Student adds emphasis correctly.				
Vocabulary Student uses a variety of word choices, including words learnt in this unit.				



MISSION

Objective
Students will
- discuss how adventure in their personal lives can change the way they think about themselves.

Content Vocabulary *comfort zone*

Resources Video scene 1.2 (DVD/Website/CPT); Worksheet 4.1.6 (Teacher's Resource CD-ROM/Website); Online Workbook: Meet the Explorer; CPT: Mission

BE THE EXPERT

Teaching Tip

When students work in pairs and exchange information, remind them to pay attention to what their partner is saying. Encourage students to repeat aloud what their partners say, ask their partners to clarify unfamiliar or unclear information and ask follow-up questions. These techniques will help students become active listeners.

Online Workbook Meet the Explorer

Mission

- Read aloud the mission *Test Your Limits*. Say *We've learnt about athletes and others who have tested their physical and mental limits in different ways.* Ask a student to read aloud the quote by Cory Richards. Ask *What do you think Cory means by our comfort zone?* (doing things that we know how to do and that we've done before) Ask *Do you agree with Cory? Do you think that adventure is trying something new that we haven't tried before?* Invite students to say whether they agree or disagree and describe what they think adventure is.

- **Activity 1** Play **Video scene 1.2**. Tell students to focus on how Cory pushes himself to reach new boundaries of adventure and storytelling.

- **Activity 2** Put students into pairs. Tell them to discuss how climbing the world's tallest mountains in the winter helps Cory Richards get out of his comfort zone. Then tell them to consider and discuss what takes them out of their own comfort zones. Remind students of the group work that they did in Activity 6 on page 19 when they discussed the positives of a difficult or uncomfortable situation. Tell students to use embedded clauses, questions or commands in their discussion.

- **Activity 3** Tell students to consider on their own how they could get more adventure from their lives and what they might learn about themselves by trying something new. Remind them to use embedded clauses and questions in their responses. Model an example. Say *I wonder if I would enjoy water skiing. I think that I might be stronger than I realise.*

- **Worksheet** Hand out **Worksheet 4.1.6**. Explain that students will use the worksheet to further discuss how people push their physical and mental limits.

PROJECT

Objective
Students will
- choose and complete a project related to pushing limits.

Academic Language *benefits, instructional*

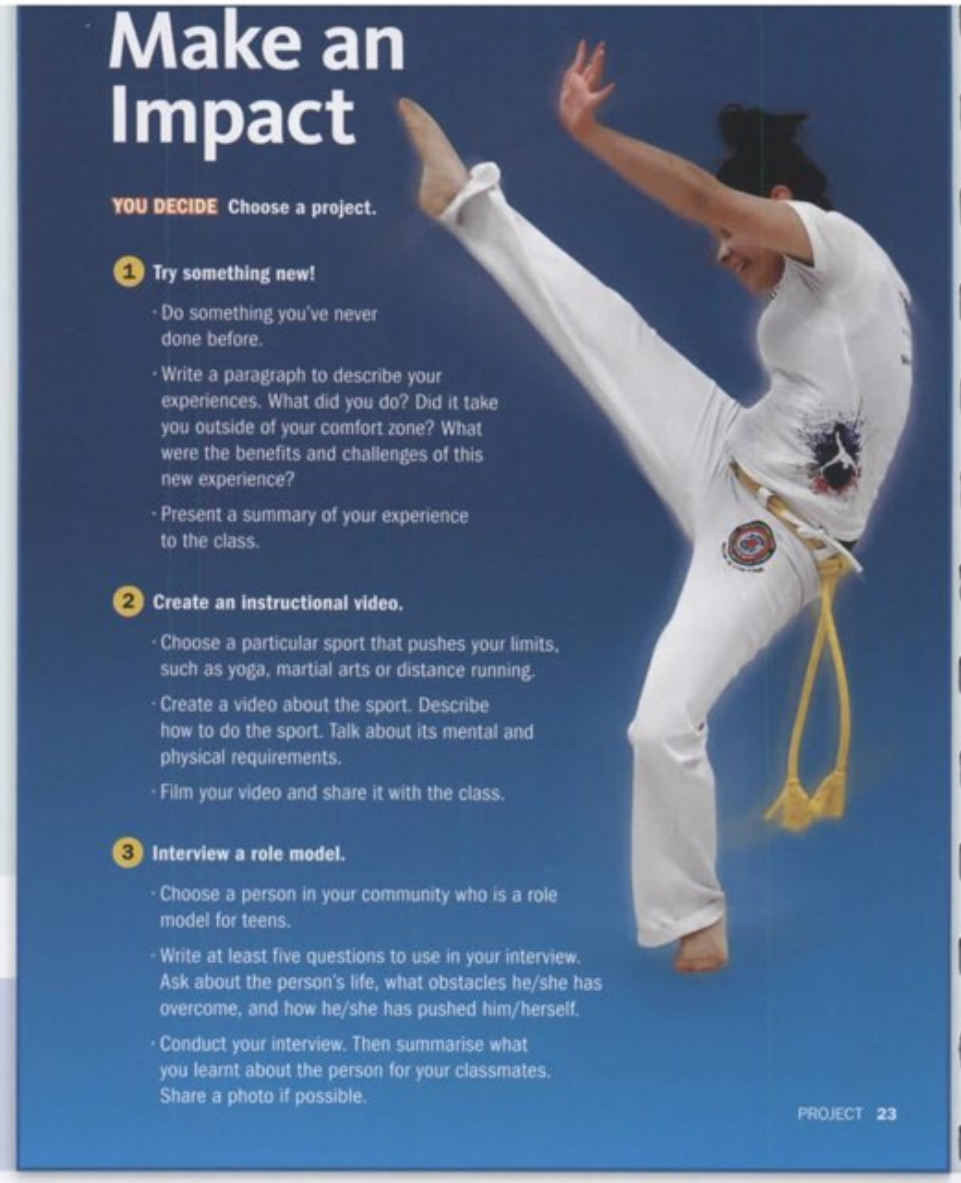
Content Vocabulary *comfort zone, requirements, role model*

Resources Assessment: Unit 1 Quiz; Workbook pages 11 and 90. Worksheet 4.1.7; (Teacher's Resource CD-ROM/Website); CPT: Make an Impact and Review Games; Graphic Organisers: Interview, Storyboard (Teacher's Resource CD-ROM/Website)

Materials audio recording device *(optional)*, video recording device

Assessment Go to page 254.

Unit Review Assign Worksheet 4.1.7.
Workbook Assign pages 11 and 90.
Online workbook Now I can



Prepare

- YOU DECIDE Ask students to choose a project.
- **Activity 1** Brainstorm with students some different types of experiences they could try. Ideas might include trying an unusual food, solving a difficult puzzle (jigsaw puzzle, crossword puzzle or logic puzzle), trying a new hobby and speaking in another language outside of class.
- Remind students that a summary should clearly and briefly describe the experience they try as well as its benefits and challenges.
- **Activity 2** Tell students to research whether any specific knowledge or equipment is needed to do the sport they choose. Then tell them to plan their videos before they film them. You may want to provide copies of the Storyboard graphic organiser for students to use. Students can write brief descriptions or draw pictures for each scene in their video.
- **Activity 3** Provide students with several copies of the Interview graphic organiser or tell them to use their notebooks to write their interview questions. Remind students of good interviewing practices: introduce themselves, state the purpose of their interview, speak clearly, ask follow-up questions if the opportunity arises, take notes and thank the person they interview for their time. If students plan to take a photo or use an existing photo, remind them to get permission from the interviewee.

Share

- Schedule time to have groups present their final projects to the class.
- **Modify** Tell students to use technology in Activities 1 and 3. As an alternative in Activity 1, students may choose to record their experiences in a video. In Activity 3, students may choose to make an audio or video recording of the interview.

STUDENT'S BOOK AUDIO SCRIPT

Track 002 1 **Listen and read.** See Student's Book pages 10–11.

Track 003 2 LEARN NEW WORDS **determination** / The players played with determination because they wanted to win. **enable** / Good shoes enable me to run faster. **endurance** / Runners need endurance to go long distances. **extreme** / Hurricanes and blizzards are extreme weather events. **hazardous** / When climbing in the snow you need to prepare for hazardous conditions. **limit** / He discovered his limit while climbing the mountain. **mental** / A difficult puzzle provides a good mental challenge. **obstacle** / Obstacles come between us and our goals. **opponent** / My opponent was much stronger and won the game. **overcome** / I need to overcome my fear of heights. **pain** / Swimming all day causes me pain in my whole body. **physical** / Some sports require a great deal of physical strength. **push yourself** / You really have to push yourself to run a marathon. **role model** / Parents, teachers and athletes can all be role models.

Track 004 5 Do you set boundaries for yourself? Or do you like to push yourself to your limits? And are your limits the same as the extreme athletes you've read about? For some people, climbing an 8,000-metre mountain is an unreachable goal. They won't even try it because they know they can't get to the top. Others work to achieve that goal, even if they have to try several times before making it. If you have the physical ability, courage and determination, you can do unbelievable things!

Track 005 5 LEARN NEW WORDS **achieve** / With hard work and determination, you can achieve your goals. **boundary** / Many extreme athletes feel that there are no boundaries for what they can do. **unbelievable** / Skydiving can be an unbelievable experience. **unreachable** / When you're climbing, the top of the mountain may seem unreachable, but you can get there!

Track 006 SPEAKING STRATEGY See Student's Book page 13.

Track 007 1 **S1**: Hugo, come and look at these photos! **S2**: Wow! What are these people doing? **S1**: It's called 'extreme ironing'. **S2**: Really! I never knew that there was such a thing! **S1**: Yes, it's really different. **S2**: Tell me more about it. **S1**: Basically, people compete against one another to see who can iron under the most extreme conditions. **S2**: Really? That's unbelievable! **S1**: It's true, though. Look at the guy in this photo—he's climbed to the top of the car to do his ironing! **S2**: Who does that? What about you, Ana? Would you try extreme ironing? **S1**: I don't think I like ironing enough to take that kind of risk!

Track 008 GRAMMAR See Student's Book page 14.

Track 009 1 **1.** Skydiving would be amazing. **2.** What is the most dangerous extreme sport? **3.** Have a lesson before you go kite surfing. **4.** Mountain climbers must have endurance. **5.** Who is the most determined person you know?

Track 010 3 A non-traditional sport, such as ice climbing, can really push us to our physical limits. But, have you ever done anything that pushes you to your mental limits? Around the world, students participate in tough academic competitions, such as Maths Olympiads. These events require a lot of training, just as an extreme sport does. The competitions often require students to struggle with complex problems. Sometimes it takes over an hour to complete just one!

Nur Muhammad Shafiullah knows first-hand how the Maths Olympiads can push mental limits. He is the youngest student ever to compete in the International Mathematical Olympiad. At 15, Nur Muhammad went to the international competition to represent his native country, Bangladesh. He competed against students from 125 countries and took the bronze medal! The next year he did it again. The year after that he earned a silver medal. Nur Muhammad's maths skills are really unbelievable. What about you? Do you think the International Mathematical Olympiad is beyond your mental limits?

Track 011 3 LEARN NEW WORDS **event** / Maths Olympiads are serious, competitive events. **non-traditional** / Extreme ironing is a non-traditional sport. **represent** / Intelligent students represent their countries at the International Maths Olympiad. **struggle** / Some students struggle for hours to solve problems.

Track 012 2 LEARN NEW WORDS **beyond** / Extreme athletes go beyond physical and mental boundaries. **consequence** / When you fall, there can be consequences, like a broken leg. **in control** / Being in control of your body is important when skiing. **limb** / Your arms and legs are your limbs. **peak performance** / Olympic athletes train to reach their peak performance levels.

Track 013 3 WHILE YOU READ See Student's Book pages 16–17.

Track 014 GRAMMAR See Student's Book page 20.

In This Unit

Theme This unit is about digital humanitarianism and using crowdsourcing to help others.

Content Objectives
Students will
- describe how digital humanitarians use technology and crowdsourcing to help others around the world solve local problems and recover from natural disasters.
- identify ways to use digital tools and social media to help others in their community and around the world.

Language Objectives
Students will
- talk about digital humanitarians and crowdsourcing.
- make suggestions and agree or disagree.
- use future tenses to describe events.
- use quantifiers to express amounts.
- write a persuasive essay about participation in community service.

Vocabulary
pages 26–27 *amount, the big picture, crisis, crowdsourcing, data, evidence, expand, generate, humanitarian, measure, monitor, process, scale, upload*
page 28 *collaboration, co-ordinate, relief, situation, update*
page 31 *cause, donate, fundraiser, network, volunteer*
page 32 *empower, engineer, face, generation, innovation*
Vocabulary Strategies Suffixes *-ion, -tion;* Identify parts of speech

Speaking Strategy Making suggestions and agreeing or disagreeing

Grammar
Grammar 1 use future tenses to describe events in the future
Grammar 2 use quantifiers to express amounts

Reading *Focus on the Future*
Reading Strategy Use text features for comprehension

Video Scene 2.1: *Crisis Mapping;* Scene 2.2: Meet Patrick Meier

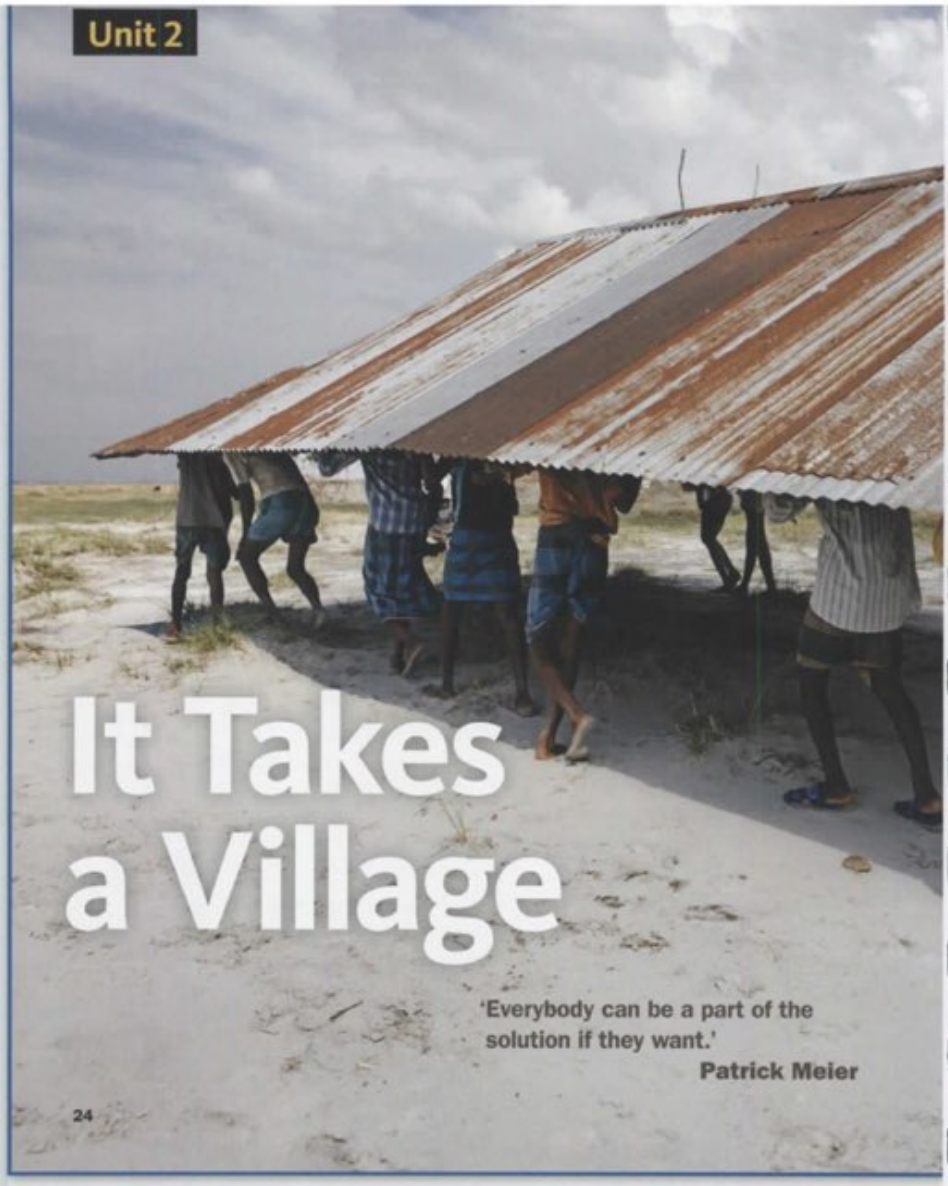
Writing Persuasive essay

National Geographic Mission Do Your Part

Project
- Charity awareness; Teen inventor; Technology invention

Pronunciation Stress in compound nouns

Pacing Guides 4.2.1, 4.2.2, 4.2.3



Introduce the Unit

- **Build background** Write on the board: *It takes a village to raise a child.* Ask *Has anyone heard this saying before? What do you think it means?* Discuss students' responses. Guide them to understand that it means that all the people in a community look out for and have an influence on children as they grow up.

- Tell students to open their books at pages 24–25. Ask a student to read aloud the unit title. Then ask *What can you see in the photo?* (a group of people carrying the roof of a building)

- Ask questions such as these to encourage further discussion:
  Is the roof new or old? What makes you think so?
  What do you think happened to the rest of the building?
  Why are the men moving the roof by themselves, without machines or other equipment?

- Ask a student to read aloud Question 1 on page 25. Encourage a class discussion about possible reasons why the men are moving the roof. List students' ideas on the board.



Men working together to move a roof, Bangladesh

TO START

1. What are the people in the photo doing? Why might they be doing this?
2. Think of a time when you needed someone else's help. Describe the problem. Who helped you? How did they help?
3. People need help after a crisis, such as an earthquake or a powerful storm. What types of things do people need in these situations? How could you help them?

25

- Share with students the information in About the Photo that explains what is happening in the photo. If possible, use a map or globe to show students the location of Bangladesh.
- Ask another student to read aloud Question 2. Invite students to describe different types of problems they've had. Encourage students to come up with a variety of problems, such as a broken door handle or not being able to complete a homework assignment.
- Next, ask a student to read aloud the unit title and the quote by Patrick Meier on page 24. Ask a different student to read aloud Question 3. Encourage a class discussion of students' ideas about people's needs in a disaster situation and how the students themselves might be able to help.

Extend

- Hand out **Worksheet 4.2.1**. Put students into pairs. Explain that partners will be writing about and discussing ways that people help each other and the reasons that people help each other.

UNIT OPENER

Objectives

Students will

- discuss the collaborative effort made by people in a photo.
- discuss types of help needed and ways others provide help in situations involving personal problems and global crises.

Resources Worksheet 4.2.1 (Teacher's Resource CD-ROM/Website); CPT: Unit Opener

Materials world map or globe *(optional)*

BE THE EXPERT

About the Photo

Villagers in Sirajbag, Bangladesh, move the roof of a mosque threatened by flooding. The mosque, designed to be easily dismantled, was taken apart, moved and rebuilt in less than one day. Sirajbag, a village of several thousand people, is located on one of the many islands of shifting silt in the Jamuna River. Though most of Bangladesh is low-lying, the islands' particular location makes them prone to flooding and river erosion. In recent decades, climate change has caused an increase in seasonal flooding.

Teaching Tip

Allow students extra time to form an answer when you ask a question. Students are thinking in a new language, so they may initially remain silent after a question is asked. Silence may be an indication that students are mentally forming their answers, not that they do not know the answers.

Related Words

corrugated metal, rust, sand

VOCABULARY

Objectives
Students will
- identify and use vocabulary related to digital humanitarianism and crowdsourcing.
- use new vocabulary to read about and discuss ways that digital tools and social media are used to help others.

Target Vocabulary *amount, the big picture, crisis, crowdsourcing, data, evidence, expand, generate, humanitarian, measure, monitor, process, scale, upload*

Content Vocabulary *analyse, enormous, global, massive, strike, typhoon, up-to-date*

Pronunciation Stress in compound nouns

Resources Tracks 015–016, 115–116 (Audio CD/ Website/CPT); CPT: Vocabulary



1 How can we help people we don't know? Why would we want to? Discuss. Then listen and read. 015

We want to help each other in times of **crisis**. This idea is nothing new. For centuries, our ancestors have worked together to help one another whenever a crisis struck their village. This collaboration brought their communities together. Over time, these communities have **expanded** to become a 'global village' of over seven billion people. When we hear about a massive earthquake or typhoon hitting another part of the world, we still want to help – but how? Crisis mapper Patrick Meier has found a way you can help – without even leaving your home.

Meier has created a network of 'digital **humanitarians**', who produce crisis maps that **measure** the **scale** of a disaster and provide the most up-to-date information for what is needed on the ground. They do it through **crowdsourcing**, or transmitting information using online resources and social media.

Patrick Meier analyses data to help with relief efforts during a storm.

Warm Up

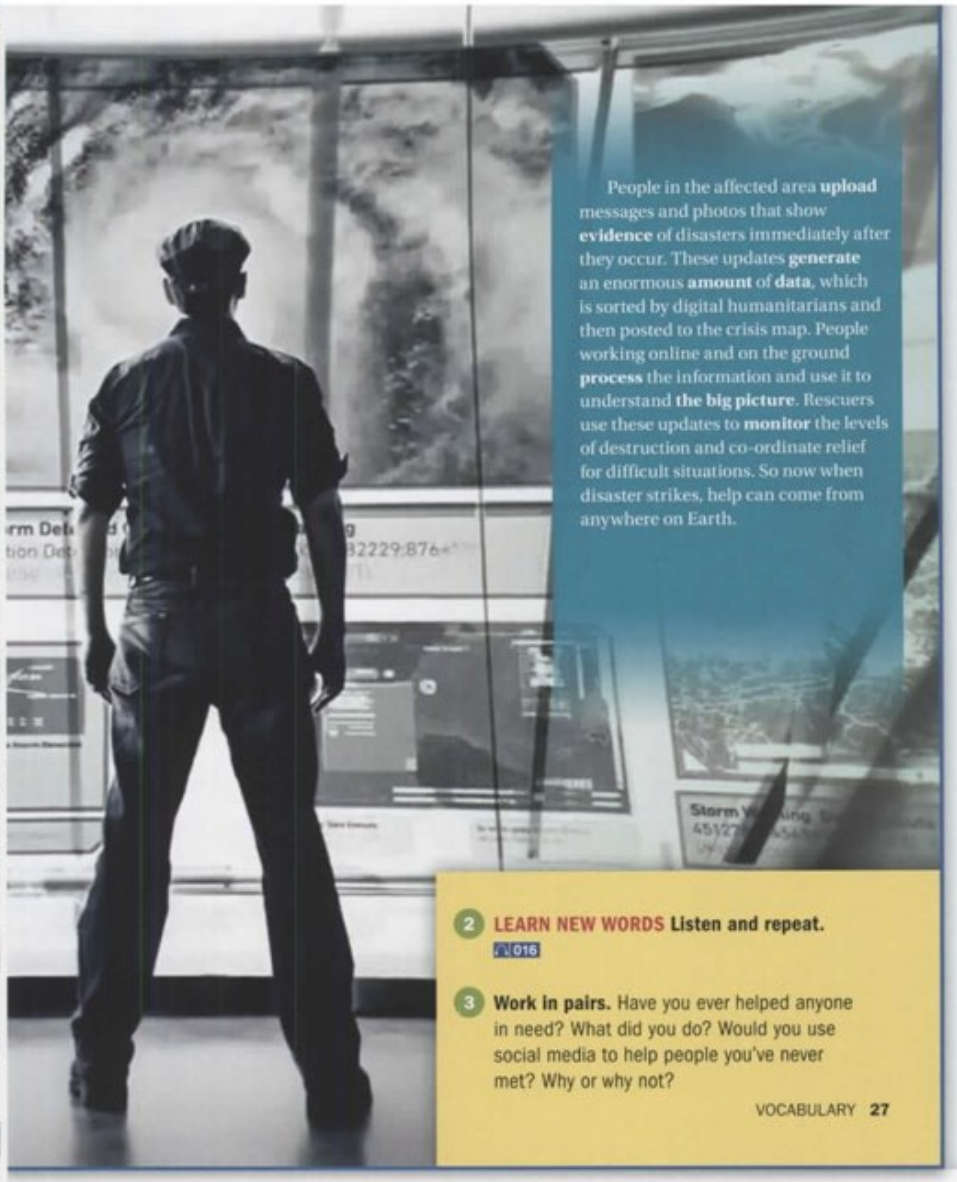
- **Activate prior knowledge** Say *Let's think of some ways we use digital technology today.* Write *smartphone* on the board. Ask *What are some ways that we use a smartphone?* (make and receive phone calls, send and receive text messages, read and write messages on social media, view and post photos on social media, read news online, search for information) Write students' responses on the board.

- Next, write *computer* on the board. Ask *What are some ways that we use a computer?* List students' responses on the board. Students may name similar, as well as different, uses as for a smartphone as a computer. Say *One way we use smartphones and computers is to communicate with other people. We also use smartphones and computers to get information.*

Present 1 2

- Tell students to open their books at pages 26–27. Ask a student to read aloud the Activity 1 questions at the top of page 26. Say *Suppose there was a hurricane in another country.* Ask *What are some ways we could help the people affected by the hurricane? What are some reasons that we would want to help these strangers?*

- **Model** Say *One way we can help strangers is to hold a community sale and donate the money we raise. We can give the money to an organisation that helps people affected by a disaster, such as the Red Cross. A reason that we might want to help strangers is because we can imagine how they feel.* Draw the following T-chart on the board:



People in the affected area **upload** messages and photos that show **evidence** of disasters immediately after they occur. These updates **generate** an enormous **amount** of **data**, which is sorted by digital humanitarians and then posted to the crisis map. People working online and on the ground **process** the information and use it to understand **the big picture**. Rescuers use these updates to **monitor** the levels of destruction and co-ordinate relief for difficult situations. So now when disaster strikes, help can come from anywhere on Earth.

2 **LEARN NEW WORDS** **Listen and repeat.** 016

3 **Work in pairs.** Have you ever helped anyone in need? What did you do? Would you use social media to help people you've never met? Why or why not?

BE THE EXPERT

Our World in Context

Patrick Meier, shown in the photo, is a National Geographic Explorer. He is also a crisis mapper. He led the first effort to use crisis mapping in directing humanitarian aid during the Haiti earthquake in 2010. Since then, crisis mapping has been used in the aftermath of the typhoon that swept through the Philippines in 2013, during the West African Ebola crisis in 2014, in the wake of the Nepal earthquake in April 2015 and in identifying refugee camps for Syrians fleeing ongoing unrest in the Middle East.

Pronunciation

Go to Student's Book page 144. Use Audio Tracks 115 and 116.

Stress in compound nouns Compound nouns are nouns that are formed from two words. The words can be *noun + noun (mobile phone), adjective + noun (the White House, the red carpet)* or even *adverb + noun (update, overhead).*

Some compound nouns are written as one word (*earthquake, laptop*) or as two words (*phone call, pop music*). Sometimes compound nouns are separated with a hyphen (*in-law*).

Ways We Can Help	Why We Want to Help
hold a community sale and donate the money	we can imagine how others feel

List students' ideas about other ways to help and reasons for helping in the chart.

- 1 Play **Track 015** and tell students to listen and read. Discuss the reading with students. Ask questions such as:
  What is the 'global village' of over 7 billion people who want to help when a crisis strikes?
  How do digital humanitarians get the data that they use to create a crisis map?
  How can a crisis map be useful in a natural disaster?

- 2 **LEARN NEW WORDS** Play **Track 016.** Tell students to listen and repeat. Tell partners to take turns saying each word. Tell one partner to think of a question that includes the target word. Tell the other partner to answer the question using the target word.

- Say *Use each word in a question. Your partner will answer the question using the same word.* Model an example for students. Say *You ask, 'Have you uploaded any photos to the Internet this week?' Your partner answers, 'Yes, I uploaded the photos from my sister's concert'.* Tell partners to continue asking and answering questions until they have used all the vocabulary words. Invite partners to share some of their questions and answers with the class.

VOCABULARY

Objectives
Students will
- practise using vocabulary related to digital humanitarianism.
- use a vocabulary strategy to learn new vocabulary.

Target Vocabulary *collaboration, co-ordinate, relief, situation, update*

Vocabulary Strategy Suffixes *-ion, -tion*

Academic Language *definitions, survey*

Content Vocabulary *microbot*

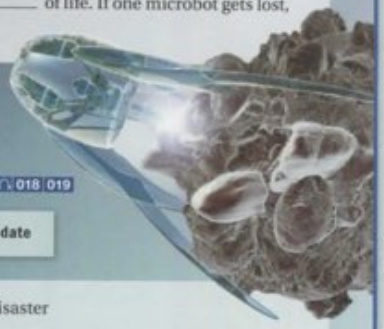
Resources Online Workbook/Workbook pages 12–13; Worksheet 4.2.2 (Teacher's Resource CD-ROM/ Website); Tracks 017–019 (Audio CD/ Website/CPT); CPT: Vocabulary

Materials pieces of card *(optional)*



4 Read and listen. Write the missing words and phrases. 017

Patrick Meier uses _crisis_ maps and social media to organise information and give _the big picture_ on what's happening at a disaster site. However, scientists are using other forms of technology to collect _data_, to _generate_ solutions and to help people in need. Some scientists are developing microbots to explore where humans cannot easily go, such as outer space or inside the human body. Microbots are simple machines, but when released in large _amounts_, they can accomplish a lot. If sent into a disaster area, scientists could _monitor_ their movements and _measure_ their progress while they search for _evidence_ of life. If one microbot gets lost, the mission could still continue.



A microbot attacking a cancer cell

5 LEARN NEW WORDS Listen to these words and write them next to the definitions. Then listen and repeat. 018 019

collaboration	co-ordinate	relief	situation	update

relief 1. help for victims of a disaster
collaboration 2. the process of working together
situation 3. what is happening at a certain time and place
co-ordinate 4. organise and connect people so they can work together
update 5. the latest information

6 YOU DECIDE Choose an activity.

1. **Work independently.** Write three survey questions about using technology to help crisis victims. Explain the idea of 'digital humanitarians' to several friends outside of class, and then ask them to answer your questions. Present their responses to the class.
2. **Work independently.** Interview a technology expert about how social media technology can be useful in helping people. You could interview a technology teacher at your school, a family member or another adult you know who works in technology. Present your interview in a magazine article.
3. **Work in groups.** Discuss ways that you can get crowdsourced information from the Internet.

28 VOCABULARY

Practise 3 4 5

- 3 Put students into pairs. Say *Think about a time when you helped someone. What specific actions did you take? Then consider whether you might use social media to help other people. Read the Activity 3 questions on page 27.* Tell partners to ask and answer the questions in Activity 3. Say *Try to use your new words in your answers.*
- 4 Tell students to turn to page 28. Say *Look at Activity 4. You're going to listen to a paragraph that has some of the new words you learnt. Complete the sentences in the paragraph with the new words you hear.* Play **Track 017** and tell students to fill in the blanks.
- When students have finished, say *Now listen again. Check your answers.* Play **Track 017** again and tell students to check their answers.
- 5 **LEARN NEW WORDS** Play **Track 018**. Tell students to listen and write each word next to its definition in items 1–5. Then play **Track 019** and tell students to repeat each word and sentence. Review answers for items 1–5 together as a class. Then tell students to

look for each word in context on pages 26–27.

- **Vocabulary Strategy** Point out the word *collaboration* on page 26. Write *collaborate* and *collaboration* on the board. Circle the *-ion* ending in *collaboration*. Explain that *-ion* is used to turn a verb such as *collaborate* into a noun. Point out that the ending *-ation* is also used to turn a verb into a noun (organise – organisation). Ask students to find other words with *-ion* and *-ation* endings on pages 26–27. (information, destruction)

Apply 6

- 6 YOU DECIDE Tell students to read Activity 6. Say *Choose one activity. Decide whether you want to work on your own or in a group.* Give students time to read over the three options and make their choices. Say *Try to use the new words you learnt as you do the activity you chose.*

- Tell students who choose the first activity to re-read the text on pages 26–27 before writing their survey questions. Suggest types of questions they might use, such as multiple-choice, open-ended or ordering questions. Remind students to summarise their survey response data in their presentations to the class.

- Students who choose the second activity can post their interview questions to an online forum if they don't know anyone in a technology field. Remind students to include an introduction, important information and quotes from the interview and a conclusion in their magazine articles.

- Assign students who choose the third activity to groups. Tell each group to designate a student to make notes. Groups can present a summary of their discussions to the class.

- Invite students to share their completed activities with the class.

Extend

- Put students into pairs. Tell one student to act as a digital humanitarian and the other as a rescuer. Tell partners to role-play a disaster situation. Tell students to write a dialogue and use as many of their new vocabulary words as they can. Partners can act out their role plays for the class.

- If time allows, hand out **Worksheet 4.2.2**. Explain that students will use vocabulary words to talk and write about how people use technology to help each other in disaster situations.

Consolidate

- Put students into two groups. Prepare cards with a vocabulary term on each card. Hand out the cards to both groups. Say *One group gives clues about a vocabulary word. The other group guesses the word. Groups take turns.* Model an example. Say *The first group has a card with the word* scale. *Group members give clues such as* size *or* how big or small something is. *The other group guesses* scale. Tell groups to take turns until all the vocabulary terms are used.

BE THE EXPERT

Vocabulary Strategy

Suffixes *-ion, -tion* Explain that the suffixes *-ion* and *-tion* are used to change verbs into nouns. The nouns talk about a process, action or result. Other words with these suffixes include:

observe	>	observation
locate	>	location
create	>	creation
donate	>	donation
compute	>	computation
demonstrate	>	demonstration

About the Photo

The photo shows an artist's rendering of a nanotechnology probe attacking a cancer cell.

Teaching Tip

When students are learning several new vocabulary terms at the same time, help them to use the new terms together in context. For example, provide sentences in which a new vocabulary term describes or helps to explain another new vocabulary term, such as *Rescuers looking at recent updates believe the situation in the disaster area has improved.*

Related Word

probe

Formative Assessment

Can students

- use new vocabulary related to digital humanitarianism and crowdsourcing?

  Ask *What's one reason that people upload messages and photos after a disaster?*

- use new vocabulary to discuss ways that digital tools and social media are used to help others?

  Ask *How do rescuers get an idea of the big picture when a disaster strikes?*

Workbook For additional practice, assign Workbook pages 12–13.

Online Workbook Vocabulary

SPEAKING STRATEGY

Objectives
Students will
- make suggestions.
- agree or disagree.

Speaking Strategy Making suggestions; Agreeing and disagreeing

Academic Language *suggestion*

Resources Online Workbook; Worksheet 4.2.3 (Teacher's Resource CD-ROM/ Website); Tracks 020–021 (Audio CD/ Website/CPT); CPT: Speaking Strategy

Materials paper clips, pencils, scissors

SPEAKING STRATEGY 020

Making suggestions	Agreeing	Disagreeing
I think _____.	Great idea!	I see what you mean but _____.
What if we _____?	I agree completely.	Wouldn't it be better if _____?
Wouldn't it be best to _____?	Sure, why not?	But don't you think _____?

1 **Listen.** How do the people make and respond to suggestions? Write the phrases you hear. 021

2 **Read and complete the dialogue.**



Alan: Hey, Eva. Did you hear about the hurricane in the Caribbean? I've been busy helping out.

Eva: How can you help from far away?

Alan: I volunteer to read messages and look at photos from the area to decide who needs help.

Eva: _____Great idea!_____ I wish there were something I could do.

Alan: _____I think_____ you should help out. _____What if we_____ work together?

Eva: _____But don't you think_____ I would need to be trained? I have no idea what to do!

Alan: I can show you. It's easy! And you could help a lot of people. What do you think?

Eva: _____Sure, why not?_____

3 **Work in pairs.** Imagine there has been a natural disaster in another country. Student A spins the wheel and makes a suggestion how to help. Student B then spins the wheel to determine whether to agree or disagree. If Student B disagrees, he/she must make a new suggestion.



Go to page 153.

4 **Work in groups.** Talk about organising a fundraiser in your school to help victims of a natural disaster. Choose a cause and discuss ways to raise money for it. Make and respond to suggestions in your discussion.

Warm Up

- **Activate prior knowledge** Ask *What do you say if you want to suggest something that you and your friends can do, such as go to the cinema?* (How about going to the cinema? Why don't we go to the cinema?) Ask *How could you reply to show that you agree with a suggestion?* (That could be fun. Definitely!) Ask *How could you reply to show that you disagree?* (I don't think that's a good idea. I'm not so sure.)
- Invite small groups to act out situations in which one student makes a suggestion about a weekend activity. The other students agree or disagree.

Present 1

- Say *We're going to learn about other ways that you can make suggestions and agree or disagree with someone's suggestion.* Tell students to open their books at page 29. Say *We'll listen to some phrases you can use to make suggestions and to agree or disagree.* Play **Track 020.**
- Ask *What phrases do the speakers use to make suggestions? What do they say to agree with a suggestion? What do they say to disagree?* List the statements and questions on the board.
- Play **Track 020** again and tell students to read along in their books. Then tell students to take turns making a suggestion and agreeing or disagreeing. Supply additional prompts such as the following:

We should _____.
OK!
What else could we do?

Why don't we _____?
Yes, but we could also _____.
That's an interesting idea, but _____.

- 1 Say *Now listen to two speakers make and respond to suggestions. Listen for words and phrases that the speakers use. Make notes about the words and phrases you hear.* Play **Track 021**. Ask students to share the words and phrases they write.

Practise 2

- 2 After students have become comfortable using the speaking strategy, tell them to complete Activity 2 independently.
- Tell students to read their completed dialogues aloud, taking turns as Alan and Eva. Ask *What words and phrases to make suggestions, to agree and to disagree did you use or hear?*

Apply 3 4

- 3 Put students into pairs. Tell partners to cut out and use the spinner on page 153 to role-play conversations that require making suggestions and agreeing or disagreeing. Model with a student. Spin the wheel and say *The spinner landed on (Volunteer with a rescue organisation).* Suggest to your student partner *I think we should (volunteer with a rescue organisation).* Tell your student partner to spin the wheel and say *The spinner landed on (agree). Great idea!*
- Tell partners to swap roles after they discuss each suggestion.
- 4 **Connect** Put students into groups of three or four. Tell them to think about their earlier discussions about the kinds of help needed by people affected by a natural disaster. Students can review any notes or journal entries they have.
- Say *Now let's think of some organisations that help people after a disaster.* Record them on the board. Consider national organisations such as the Red Cross and Doctors Without Borders as well as local civic groups. Remind students to make suggestions and agree or disagree and to use the new vocabulary. Ask groups to share their fundraising ideas with the class.

Extend

- Put students into pairs. Tell students to write three suggestions for ways to help victims of a natural disaster, using different phrases to make their suggestions. Partners should exchange lists and agree or disagree with each other's suggestions. Ask students to share their ideas with the class.
- If time allows, hand out **Worksheet 4.2.3**. Explain that students will use the worksheet to make suggestions and to agree or disagree.

Consolidate

- Say to a student *(Nestor), what suggestion have you got for a way to use technology to help people after a disaster occurs?* After (Nestor) makes a suggestion, ask another student to agree or disagree. Continue asking similar questions and inviting students to make suggestions and to agree or disagree.

BE THE EXPERT

Strategy in Depth

Making a statement or asking a question are common ways to suggest an idea and to agree or disagree with it in English. Here are some additional examples:

Make a Suggestion
What do you think?
Let's ... What do you think?
I'd like to ... How about you?
We could always ...
It would be nice to ...

Agree
Exactly!
Definitely!
That could be good.
That's an idea.
I think that's a fantastic idea.
I like the sound of that.
That's not a bad idea.
You know what? That's a good idea.
Cool!

Disagree
Definitely not!
No way!
You can't be serious!
Yes, but ...
I don't think that'll work.
Do you really think ...?

Formative Assessment

Can students
- make suggestions?

  Say *Make a suggestion about a way to use social media to help people in a disaster area.*
- agree or disagree?

  Say *I'll make a suggestion and you respond in two different ways to agree and disagree.* Then make a statement such as *What if we started a group at our school to monitor news websites for ways to help during natural disasters?*

Online Workbook Speaking Strategy

GRAMMAR 1

Objectives

Students will

- use future tenses to describe events in the future.
- identify and use words associated with community service.

Grammar Use future tenses to describe events in the future

Target Vocabulary *cause, donate, fundraiser, network, volunteer*

Academic Language *future tense, prediction, timeline*

Content Vocabulary *asteroid, commercial, community service, magnitude, upcoming*

Resources Online Workbook/Workbook pages 14–15; Tracks 022–025 (Audio CD/Website/CPT); CPT: Grammar 1

Materials audio or video recording devices *(optional)*

GRAMMAR 022

Future tenses: Describing events in the future

Over the next few years, people **will look** online to find volunteers to help with disaster relief.

In the upcoming years, researchers **will be working** to develop new technologies that solve global problems.

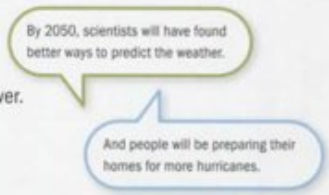
By 2050, organisations **will have found** new online resources to solve their biggest problems.

1 Listen. Write the future tense forms you hear on the timeline. 023



2 Work in pairs. Make two additional predictions for the years 2040 and 2060. Write your answers in the spaces provided on the timeline from Activity 1.

3 Work in groups. Look again at predictions on the timeline. Discuss what scientists and everyday people will do to handle these situations. Use the future tenses in your answer.



30 GRAMMAR

Warm Up

- **Build background** Say *I've got plans for the weekend. I will (help at the community fair) on Saturday. I will be (helping at the community fair) for the whole weekend. After next weekend, I will have (helped at the community fair) for (three years in a row).*
- Ask *Has anyone else got plans for the weekend? Will you play a sport? Who will be going to the cinema? Who will be helping out at home or in the community? Will anyone have (completed their homework assignments) before Sunday?*
- Invite students to describe their plans for the upcoming weekend. Ask *(Rosa), what will you do this weekend? (Marco), will you be playing (football) on Saturday and Sunday? (Umar), will you (go hiking) with your family?*
- Ask students to share their weekend plans. Say *We use future tenses to talk about events that will happen at a later time or to talk about our intentions.*

4 **LEARN NEW WORDS** **What can you do to help your neighbours?** Read the suggestions for helping in your own community. Then listen and repeat. 024

What will you do the next time a disaster strikes? You know you can help others without ever leaving your home. But being involved in your community is also important. Over the next year, what will you be doing to help out locally?



Volunteer to clean up a beach or a local park.



Help out at a local library or animal shelter.



Hold a **fundraiser** to raise money for an important **cause**.



Organise and lead a **network** of young volunteers in your community.

5 **Listen.** Write the four activities mentioned in the dialogue. Then put a ✓ next to what the speakers decide to do as community service. 025

1. Donate old toys
2. Clean up beach ✓
3. Volunteer at library
4. Hold a fundraiser ✓

6 **Work in pairs.** Brainstorm other ways to help individuals in your community. Include 1–2 examples that would require the use of technology. Which will you be doing? Why?

7 **Work in groups.** Join another pair and compare your ideas from Activity 6. Choose the best overall idea and create a radio or TV advert to encourage others to volunteer. Use future tenses to explain how the activity will benefit members of your community.

Present

- Tell students to open their books at page 30 and look at the grammar box. Say *We use the word* will *with verbs to talk about events that are going to happen in the future. Let's listen to three sentences that talk about future events.*
- Play **Track 022** and tell students to follow along in their books. Say *We use the word* will *with different forms of a verb to say when or for how long a future event is going to occur.*
- Write the following on the board:

will look	will be looking	will have looked
will work	will be working	will have worked
will find	will be finding	will have found

BE THE EXPERT

Grammar in Depth

The simple future tense is used to make predictions, to talk about spontaneous decisions, to give future facts and to make promises and requests. To make requests or suggestions in the form of a question, use *shall* instead of *will* with the pronouns *I* and *we*.

I need to send a text to my brother. I'll send it when I finish lunch.

I promise I will return the book next week.

Shall I open the window?

The future continuous tense is used to talk about the duration of a future action or an action that is in progress at a specific time in the future.

I'll be working on a farm for three months.

What will you be doing at 8 o'clock tomorrow?

The future perfect tense is used to talk about an action that will be complete by a specific time in the future or before another future action.

By 2080, time travel will have been invented.

By the time I get to the airport, I will have spent three hours in the car.



- Circle *will look* on the board. Say *The first sentence in the grammar box uses* will *plus the infinitive form of the verb* look. *The sentence says when in the future an event is going to occur.* Ask *When will people look online to find volunteers to help with disasters?* (over the next few years)

- Circle *will be working* on the board. Say *The second sentence uses* will *plus the* -ing *form of the verb* work. *The sentence explains that a future event is going to continue to occur for a longer period of time.* Ask *When will researchers be working to develop new technologies that solve global problems?* (in the upcoming years)

- Circle *will have found* on the board. Say *The third sentence uses* will *plus* have *plus the past participle,* found. *The sentence says that a future event is going to be completed by a certain date or within a certain period of time.* Ask *When will organisations have found new online resources to solve their biggest problems?* (by 2050)

Practise 1 2 3

- 1 Direct students' attention to Activity 1. Say *Now you'll listen to a speaker use different forms of future tenses to describe events. Look at the sentences on the timeline. Write the future tense that you hear on the blank lines in each sentence.* Point out that the four blank lines on the timeline above 2040 and 2060 should be left blank until the next activity.

- Play **Track 023**. When students have completed the sentences on the timeline, invite different students to read each sentence aloud.

- 2 Put students into pairs. Say *Now let's look at Activity 2. You and your partner are going to make two more predictions. Make predictions about natural disasters or other kinds of problems that we might face in the future. Use a different form of the future tense to make each prediction. Then write each prediction above the timeline.*

- Model an example for students. Say *By 2040, some countries around the world will have experienced an extreme lack of rainfall.* Tell partners to work together to make predictions. After partners have completed the activity, ask them to share their predictions with the class. Record on the board the different forms of the future tense that students use in their predictions.

- 3 Put students into groups of three or four. Tell them to use future tenses to discuss solutions to the problems shown on the timeline. Ask two students to read aloud the dialogue in the speech bubbles to model using future tenses. Ask *What future tense verbs are used in the dialogue?* (will have found, will be preparing)

Apply 4 5 6 7

- 4 LEARN NEW WORDS Tell students to open their books at page 31. Tell them to read the instructions for Activity 4. Say *You've read about how technology is used to help people around the world who are affected by disasters. Now you're going to learn about helping locally. You'll hear about ways that you can help others in our local community.* Tell students to read the paragraph of text in Activity 4. Then play **Track 024**.

- Say *You heard some new words. Now listen again and repeat each word and sentence.* Play **Track 024** again and ask students to repeat.

- 5 Say *You're going to listen to two teens talk about what they can do to volunteer in their community. As you listen, write the four volunteer activities the teens talk about. Put a tick next to the volunteer activities that the teens decide to do.* Play **Track 025**.

- Invite students to read their answers for items 1–4 and say which community service activities the teens decide to do. You may want to point out to students that the teens are making suggestions and agreeing or disagreeing as they discuss the kinds of community service they might do.

- 6 Put students into pairs. Ask *What's another way you could help others in our community?* (Sample response: deliver meals to elderly neighbours) *What*

other way could you help that uses technology? (Sample response: set up a schedule online for volunteers to sign up to read to toddlers at the library) Say *Think of some other activities. Include one or two activities that use technology. Decide which activities you will do to help. Think about the reasons you will do each activity.* Encourage students to use future tenses in their discussions. Invite partners to share their chosen ideas and reasons with the class.

- 7 Combine pairs to form groups of four. Tell groups to compare ideas from Activity 6 and choose the volunteer idea they like best. Say *Make a radio or TV advert that convinces other people to do the volunteer activity you have chosen. In your advert, use future tenses to describe how the volunteer activity will help people in our community.* Groups can choose to write a script, make an audio recording or make a video for their adverts. Ask groups to present their adverts to the class.

Extend

- Write *will process, will be processing* and *will have processed* on the board. Say *We're going to play the game Three Plus One.* Invite four students to model the game. Tell the first student to say *will process*, the second *will be processing*, the third *will have processed* and the fourth student to use any of the three future-tense forms in a sentence. (*In the next few years, researchers will be processing massive amounts of data to help people in disaster situations.*)
- When the four steps have been completed correctly, the next student in the circle begins with another verb. Continue until all verbs in the list below have been used.

donate	volunteer	generate	expand
measure	monitor	upload	co-ordinate
achieve	enable	overcome	represent
do	choose	send	write

Consolidate

- Provide the following situations for students. Tell them to use *will, will be* and *will have* with verb forms to talk about a future event. Say *Talk about an event that will take place in the future. Choose one of the situations on the board. Use* will, will be *or* will have *to describe when your event occurs.*

donate school supplies	volunteer at a food kitchen
collect items for recycling	build a network of digital humanitarians

BE THE EXPERT

Teaching Tip

To give students additional practice with future tenses, tell them to create personal timelines and label them with dates and events that they expect to occur in their own lives. Students' timelines might include statements such as the following: *In 2021, I will run a marathon. From 2022 to 2026, I will be attending a university. By 2030, I will have hiked in the Andes.*

Related Words

spades, cage, car wash, hose, hard hat

Formative Assessment

Can students

- use future tenses to describe events in the future?

Name a verb in the present tense, such as *co-ordinate*. Tell students to use *will* plus the verb to talk about a future event.

Name a present participle, such as *volunteering*. Ask students to use *will be* plus the present participle to talk about a future event.

Workbook For additional practice, assign Workbook pages 14–15.

Online Workbook Grammar 1

READING

Objectives
Students will
- describe how a teenage inventor used technology to help his community and received support from a mentor.
- identify and use new words in the reading.
- use text features for comprehension.

Reading Strategy Use text features for comprehension

Vocabulary Strategy Identifying parts of speech

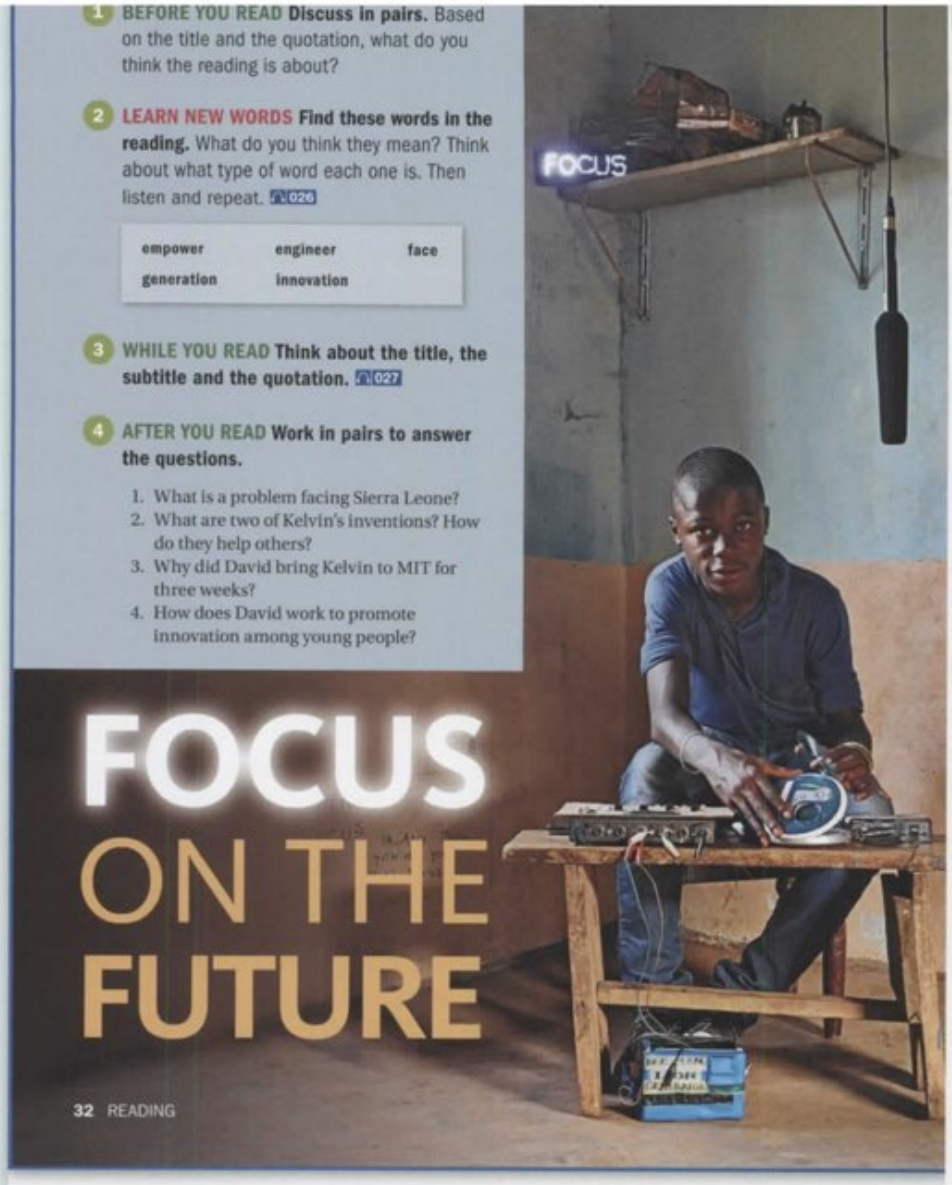
Target Vocabulary *empower, engineer, face, generation, innovation*

Academic Language *quotation*

Content Vocabulary *accomplish, acid, commit, debate, demonstration, doctoral, inspire, loyal*

Resources Online Workbook/Workbook pages 16–17; Worksheet 4.2.4 (Teacher's Resource CD-ROM/ Website); Tracks 026–027 (Audio CD/ Website/CPT); CPT: Reading; Graphic Organisers (Interview) *(optional)*

Materials a small battery familiar to students, such as AA *(optional)*; battery-powered torch *(optional)*; portable AM/FM radio *(optional)*



Warm Up

- **Activate prior knowledge** If possible, display a battery. Say *We use batteries to power devices like torches and radios.* If possible, display a torch and a portable AM/FM radio. Ask *If the electricity goes out, what can we use to see in the dark?* (a torch) *How can we listen to news reports?* (on a radio) Say *Batteries and radios are kinds of technology.*

- Ask *What other kinds of things can you listen to on a radio?* (music, sports events, talk shows) Say *You tune in a radio to get a signal that is sent by a radio station. The signal is sent through the air. You can tune in to different signals to listen to different radio stations.* Say *You're going to read and learn about a teenager who uses technologies like these to help people in his own community.*

Before You Read 1 2

- 1 Tell students to open their books at pages 32–33. Put students into pairs. Say *Look at Activity 1. With your partner, look at the title of the reading and the quotation on page 33. Discuss what you think the reading will be about.*

Kelvin Doe, also known as DJ Focus, is creating a future he wants to live in.

Imagine growing up in a place where the electricity is off more than it is on. Could you do anything to help your community? At 11 years old, Kelvin Doe saw the lack of power in his country, Sierra Leone, as a problem. Kelvin was committed to solving this problem, so he became an inventor.

Kelvin was forced to be creative in his inventions. He could not afford to buy supplies. So he collected broken electronic parts from the rubbish and taught himself how to engineer new devices. By 13, Kelvin was creating his own batteries by combining acid, soda and metal in tin cups. His simple invention gave light to a community often left in the dark, and it also led to other innovations.

At 14, Kelvin made his own FM radio transmitter and created his community's first local radio station. 'If we have a radio station,' he said, 'the people can debate issues affecting our community and Sierra Leone as a whole.' Kelvin, who took the name DJ Focus, quickly developed a group of loyal listeners.

Kelvin's hard work paid off. The national television station in Sierra Leone heard about his inventions and invited him to do a live demonstration on air. Shortly afterwards, he was invited to visit the Massachusetts Institute of Technology (MIT) to learn more about creative engineering. That visit was arranged by MIT doctoral student David Sengeh.

Like Kelvin, David grew up in Sierra Leone. He is a researcher at the MIT Media Lab, and founder of the organisation Global Minimum, Inc. Through this organisation, he aims to empower high school students in Sierra Leone by encouraging innovation. David wants more young Sierra Leoneans to be like Kelvin – to look at the problems their communities face and find ways to solve them so that their generation will have a better future.

Kelvin spent three weeks in the United States, learning from David and other researchers at MIT. At the end of the trip, he was ready to go home and get back to work. 'Whatever I've learnt here,' said Kelvin, 'I will share it with my friends, colleagues and loved ones, and do it as a team.'

'How do we create thousands of young people who are inspired by making stuff and solving the problems that are in their neighbourhood?'

David Sengeh, National Geographic Emerging Explorer, Biomedical Engineer



5 **Work in pairs.** Re-read the question in the quotation. Discuss why the question is important to David. Then try to answer it.

6 **Discuss in groups.**

1. What is a challenge facing your community? What could be done to solve it? What knowledge do you need to solve it?
2. How do David and Kelvin give back to the people of Sierra Leone? What can they learn from each other?
3. Re-read the following: *'Whatever I've learnt here, I will share it with my friends, colleagues and loved ones ...'* What have you learnt that you can share with others? What can you accomplish when you share knowledge?

- **Reading strategy** Say *The quotation talks about inspiring young people. To inspire means to make people want to do something.* Ask *How do the quotation and the title help you work out what the reading is about?* Ask partners to describe their predictions for the class.
- **2** **LEARN NEW WORDS** Say *Look at the words in the box. Some are action words or verbs. Others are nouns or words that name something.* Ask *Which words are verbs?* (empower, engineer, face) *Which words are nouns?* (generation, innovation)
- **Vocabulary strategy** Say *Sometimes the same word can be used as a noun and a verb.* Point to your face and say *This is my face. Face is a noun. But face can also be used as a verb. The verb face has a different meaning.*
- Point to the word *face* in the second-to-last paragraph of the reading. Say *Let's see whether face is used as a noun or a verb in this sentence.* Read aloud the last sentence in the paragraph. Ask *Does the sentence make sense with the meaning of the noun face?* (no) *What do you think the verb face means here?* (to deal with)

BE THE EXPERT

Reading Strategy

Use text features for comprehension Text features help students' comprehension of what they are reading. When students become familiar with different kinds of text features, they learn to use the features to help them connect to and better understand the reading content. Some common types of text features are titles and subtitles, pull quotes, photos and illustrations, labels and captions, headings and subheadings, diagrams and charts, tables and graphs and maps.

Vocabulary Strategy

As students progress in English, they see more and more words used as different parts of speech. Sometimes, the meanings for each part of speech are closely related. For example, *an engineer* and *to engineer* are related to the same concept: designing and building something. At other times, a word's meaning may change based on how the word is used. For example, when used as a noun, *face* refers to a part of the body. When used as a verb, it means *to confront*. As students learn new words, encourage them to identify each word's part of speech in context and tell them to identify differences in meaning when applicable.

About the Photo

The large photo shows Kelvin Doe, radio DJ, in a studio in Freetown, Sierra Leone.

Related Words

microphone, electronic devices/ electronics, wires



- Next, point out the word *engineer* in the third sentence of the second paragraph. Say *The word engineer can also be used as a noun and a verb.* Ask *How is engineer used in this sentence?* (as a verb) *What do you think it means?* (to build)

- Point out the words *empower, innovation* and *generation* in the second-to-last paragraph. Tell students to read the paragraph, determine the part of speech each word is and use that information to help them work out the words' meanings.

- Next, tell students to listen to **Track 026** and repeat.

While You Read 3

- 3 Say *Now we're going to learn about a teenager who uses technology to help people in his community.* Play **Track 027** and tell students to read along.

- Point to the reading's title, the subtitle in dark black lettering and the quotation by David Sengeh. Say *As you read, think about how the title, the subtitle and the quotation connect to the reading. Think about how they can help you better understand what you're reading.* Tell students that the name Kelvin Doe took, DJ Focus, comes from his belief that if you focus, you can create an invention.

- Say *Now listen and read again.* Play **Track 027** again and tell students to read along. Invite students to describe how they used the title, subtitle and quotation to help them better understand what they read about Kelvin Doe and David Sengeh.

After You Read 4 5 6

- 4 Put students into pairs. Tell partners to read the questions and answer them. If students disagree on an answer, tell them to go through the text again to find support for their answers. You may want to point out that Sierra Leone is a country in Africa and that the MIT Media Lab is located at the Massachusetts Institute of Technology in the United States.

- 5 Tell students to turn to page 33. Put students into pairs and tell them to re-read the question in the quotation by David Sengeh. Say *Talk about why this question is important to David. Re-read the last three paragraphs of the reading to try to better understand how and why David wanted to get in touch with Kelvin Doe. Then work with your partner to try to come up with some ideas that could help answer David's question.*

- When partners have finished their discussions, ask them to share their ideas for ways to answer David's question with the class.

- 6 Tell students to form groups of three or four to answer the activity questions. Tell one student in each group to act as secretary and note information from the discussion.

- When discussions have finished, say *Now let's find out what you've discussed.* Draw the following table on the board. Include a column for each group.

	Group A	Group B	Group C
Community challenge	lack of high-speed Internet access		
How to solve it	build more high-speed connections		
Knowledge needed	skills to talk with government and private-company officials		
David and Kelvin			
How they give back	David: founded organisation Kelvin: created batteries for lights		
Learn from each other	David: learnt young people want to help Kelvin: learnt engineering skills		
You share knowledge			
What you learnt and can share	how to use video equipment at local cable TV station		
What sharing accomplishes	can produce a TV programme about our community		

- Ask group secretaries to report the information from their discussions. As they do, fill in the table for each group. Make observations and ask questions about the information in the table. For example, say *Group A believes that a challenge facing our community is the lack of high-speed Internet access and a way to solve this problem is to build more high-speed connections. Can you think of another solution to this problem?*
- Leave the table on the board for the Consolidate activity.

Extend

- Put students into pairs. Hand out the Interview graphic organisers. Tell students to interview each other about skills they have learnt. Say *Ask your partner what skills they have learnt. List at least three skills. Then your partner interviews you. Make a combined list of skills that you and your partner have. Then think of a way to use two or more of your combined skills to create or do something that will help others.*
- Model an example for students. Say *(Luisa) learnt how to play football really well. Her partner (Yesenia) knows how to record and edit videos. They could use these skills to make a how-to video that teaches football skills and strategies.* Ask partners to share their ideas with the class.
- If time allows, you may want to hand out **Worksheet 4.2.4** in class. Hand out a copy to each student. Say *Look carefully at the new words on page 32. You will use your new words to answer questions. Then you will create new words on your own by using what you know about words and word parts.* Tell students to complete the worksheet individually or in pairs.

Consolidate

- Ask students to use the table on the board to name ways that Kelvin and David gave back to their community in Sierra Leone. Ask questions such as *How did Kelvin Doe help solve his community's problem of lack of power? What did David Sengeh do to help high school students in Sierra Leone?*

BE THE EXPERT

Teaching Tip

A student may become more interested in a particular topic after reading about it. Help eager students learn more about the topics that interest them by collecting books and reference materials for them to read. Take advantage of a break to help students go online to find information or ask another adult in the school community to help support the student's interests. Supporting and facilitating a student's interests will help that student become a more enthusiastic learner.

Answer Key

Comprehension 4

1. lack of power
2. Batteries and an FM radio transmitter. The batteries give light to the community and the radio transmitter gives the community a radio station.
3. to learn more about creative engineering
4. He is the founder of the organisation Global Minimum, Inc., which aims to empower high school students in Sierra Leone.

Formative Assessment

Can students

- describe how a teenage inventor used technology to help his community and received support from a mentor?

  Ask students to give two examples of Kelvin Doe's inventions and say how the inventions relate to the title and subtitle of the reading.
- identify and use new words in the reading?
- use text features for comprehension?

  Ask students to use *empower, engineer, face, generation* or *innovation* in a sentence that talks about Kelvin Doe or David Sengeh.

Workbook For additional practice, assign Workbook pages 16–17.

Online Workbook Reading

VIDEO

Objectives

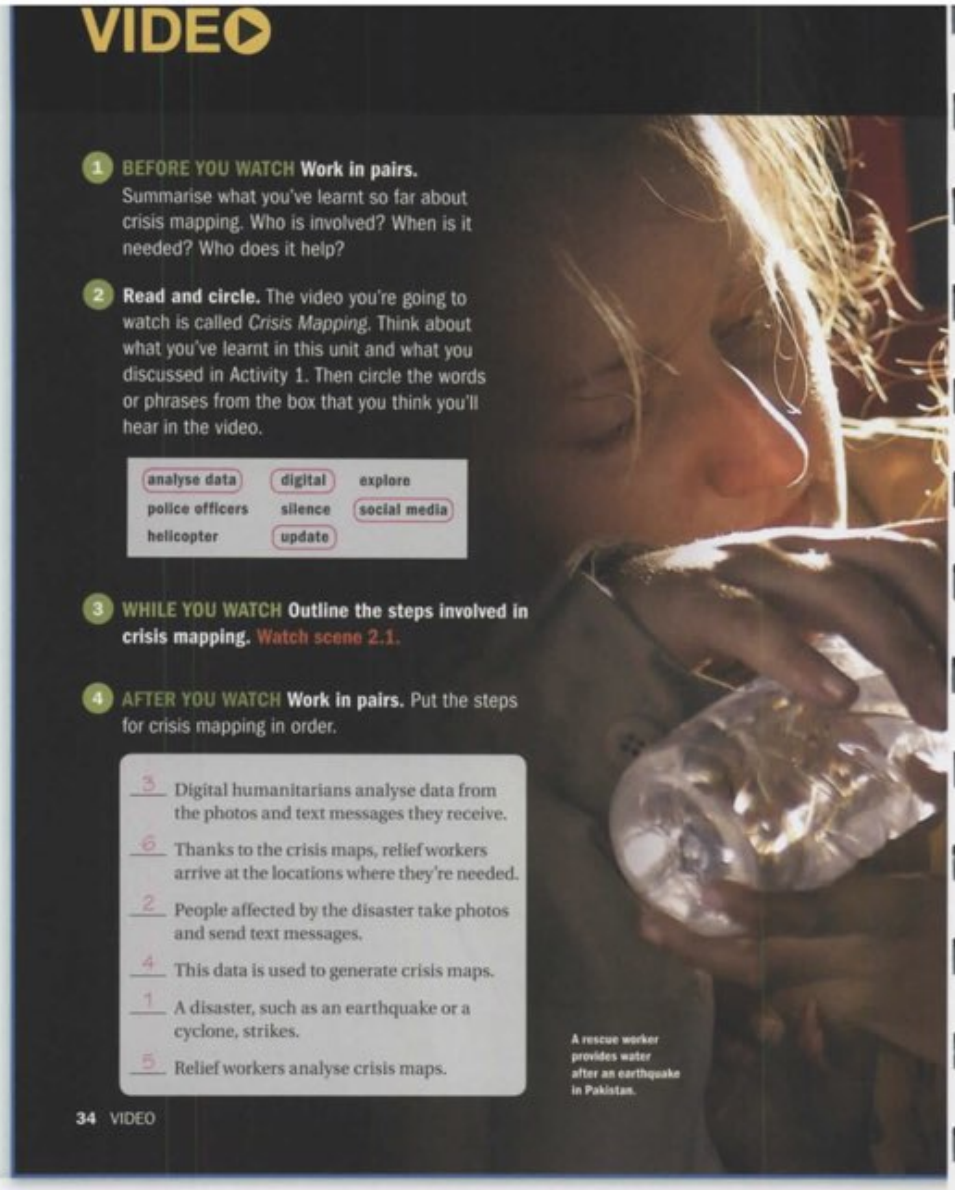
Students will

- discuss how crisis mapping is used by digital humanitarians to help others in disaster situations.
- apply the message of the video to their personal lives.

Academic Language *effective, involve, news report, outline, summarise*

Content Vocabulary *cyclone*

Resources Video scene 2.1 (DVD/Website/CPT); Online Workbook; CPT: Video; Graphic Organisers: Storyboard, T-chart (Teacher's Resource CD-ROM/Website) *(optional)*

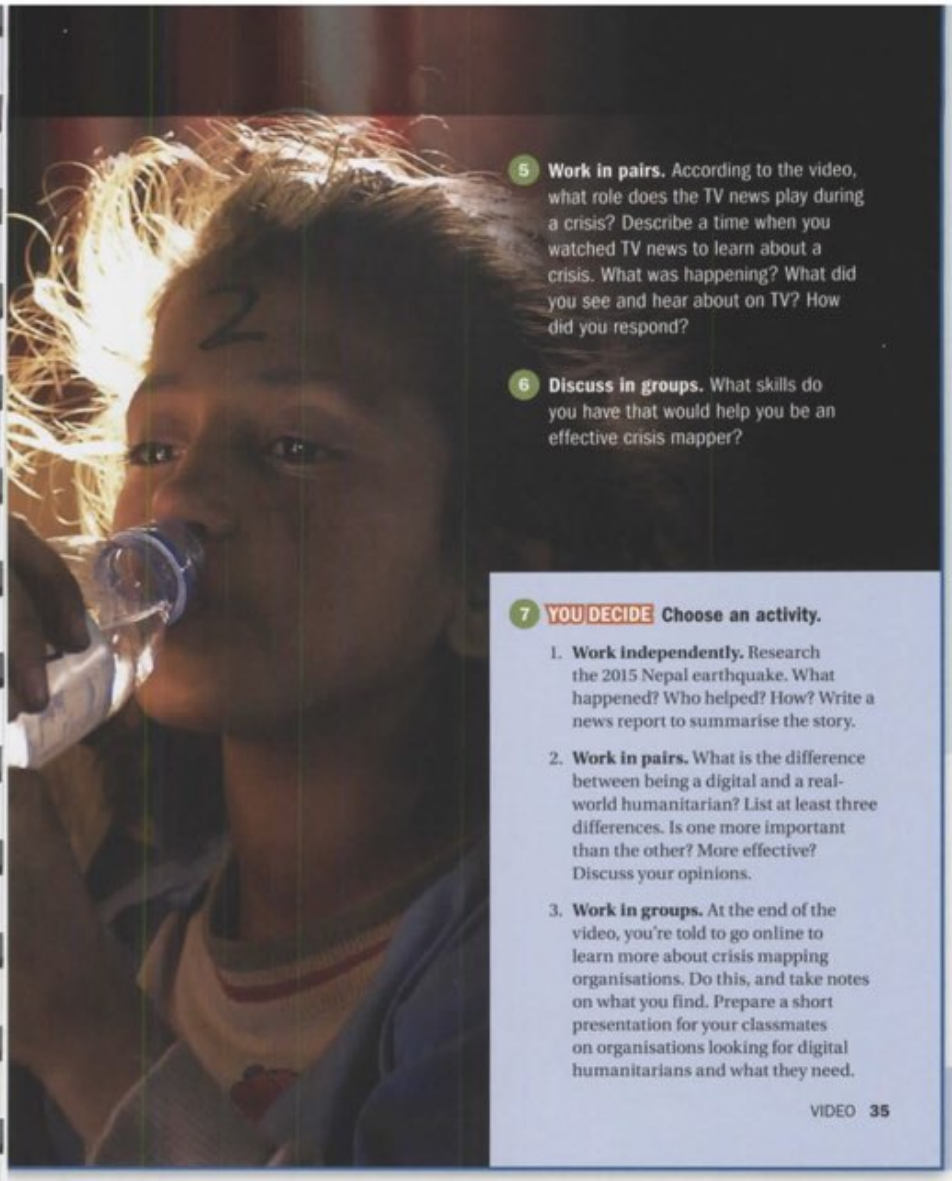


Before You Watch 1 2

- Tell students to re-read the text on pages 26–27 about Patrick Meier and his work with digital humanitarians and crisis mapping. Say *Think of any questions you may have about the work that digital humanitarians do.*
- 1 Put students into pairs. Tell them to open their books at pages 34–35. Ask a student to read aloud Activity 1. Say *Remember that a summary gives only the important information and leaves out the details.* Tell partners to write their summaries. When partners have finished the activity, if time allows, invite students to share their summaries with the class.
- 2 Say *Look at the photo on pages 34 and 35. Think about how it's related to what you've learnt in this unit.* Ask a student to read aloud Activity 2.
- Ask a student to read aloud the words and phrases in the box. Say *Think about the summaries you wrote and what you learnt about digital humanitarians. Circle the words and phrases that you predict you'll hear in the video.* After students have made their choices, ask them to share them with the class. Invite several students to explain their reasoning.

While You Watch 3

- 3 Hand out copies of the Storyboard graphic organiser or tell students to write in their notebooks. Say *Make notes while you watch the video. Write the steps involved in crisis mapping. Write them in the order that they happen. You'll use these notes to help you do the next activity.* Play **Video scene 2.1.**
- If students have difficulty following the video or understanding the text, pause the video and allow them to ask questions. Try re-playing the video with and without sound and ask students to describe and comment on what they see. Tell them to complete



5 **Work in pairs.** According to the video, what role does the TV news play during a crisis? Describe a time when you watched TV news to learn about a crisis. What was happening? What did you see and hear about on TV? How did you respond?

6 **Discuss in groups.** What skills do you have that would help you be an effective crisis mapper?

7 YOU DECIDE **Choose an activity.**

1. **Work independently.** Research the 2015 Nepal earthquake. What happened? Who helped? How? Write a news report to summarise the story.
2. **Work in pairs.** What is the difference between being a digital and a real-world humanitarian? List at least three differences. Is one more important than the other? More effective? Discuss your opinions.
3. **Work in groups.** At the end of the video, you're told to go online to learn more about crisis mapping organisations. Do this, and take notes on what you find. Prepare a short presentation for your classmates on organisations looking for digital humanitarians and what they need.

BE THE EXPERT

About the Photo

In this photo, US Army Sargent Kornelia Rachwal gives water to a Pakistani girl inside a US Army helicopter. They were being airlifted from Muzaffarabad to Islamabad, Pakistan, after a devastating earthquake hit parts of India and Afghanistan in 2005.

Teaching Tip

When you hand out a graphic organiser, make sure that students know its purpose and where to write information. If students need further guidance, draw the organiser on the board and model filling it out. Graphic organisers help students organise information, show sequence of steps and compare and contrast concepts and ideas.

Formative Assessment

Can students

- discuss how crisis mapping is used by digital humanitarians to help others in disaster situations as a result of watching the video?

  Ask *What's an example of a way that digital humanitarians use photos from a satellite to help others during a disaster?*

Online Workbook Video

their graphic organisers or finish taking notes in their notebooks.

After You Watch 4 5 6 7

- 4 Tell partners to review their completed graphic organisers or their notes. Then tell them to complete Activity 4. Ask a student to read the steps in the order in which they occur in the video.
- 5 Read aloud Activity 5. Put students into pairs. Say *Think about TV news bulletins that you've watched. How do they describe and show a disastrous event? Do the TV news bulletins describe how to help people affected by the event? Talk with your partner about your ideas.*
- 6 Put students into small groups. Tell them to review their summaries of crisis mapping and the steps shown in Activity 4. Say *Think about what you could do to help with crisis mapping if a disaster occurred here.* Ask *Are you a good organiser? Do you like to look through and sort photos? Are you familiar with using social media?* Tell groups to come up with a list of skills and concrete ways they could help with crisis mapping. Ask several groups to share their ideas with the class.
- 7 YOU DECIDE If students choose to write a news report, remind them to answer questions such as *Who? What? When? Where? Why? and How?*
- If students choose to discuss differences between digital and real-world humanitarians, you may want to provide partners with a T-chart graphic organiser. Students can list in separate columns the things that each kind of humanitarian does.
- If students choose to work in groups and research crisis mapping organisations, remind them to consider the trustworthiness of the websites they visit. Tell groups to consider creating a multimedia presentation to present the results of their research.

GRAMMAR 2

Objective
Students will
- use quantifiers to express amounts.

Grammar Use quantifiers to express amounts

Academic Language *expression, graphic, quantifier*

Content Vocabulary *accessible, majority, media, per cent, population, region, worldwide*

Resources Online Workbook/Workbook pages 18–19; Worksheet 4.2.5 (Teacher's Resource CD-ROM/ Website); Track 028 (Audio CD/ Website/CPT); CPT: Grammar 2

GRAMMAR 028

Quantifiers: Expressing amounts

Half of/Fifty per cent of the world's population **is** ...
The majority of/Most people are ...
A number of radio stations **are** online.

A lot of/Two-thirds of/Sixty-seven per cent of the people **are** ...
The majority of/Most of the population **is** ...
The number of radio stations worldwide **is** 51,000.

1 **Work independently.** Look at the graphic. Use the words below to summarise the information.

Possible answers:

1. over half / population / every day
Over half of the world's population listens to the radio every day.

2. majority / farmers / access to radio
The majority of farmers in Africa only have access to radio.

3. a lot / young people / Internet
A lot of young people listen to the radio on the Internet.

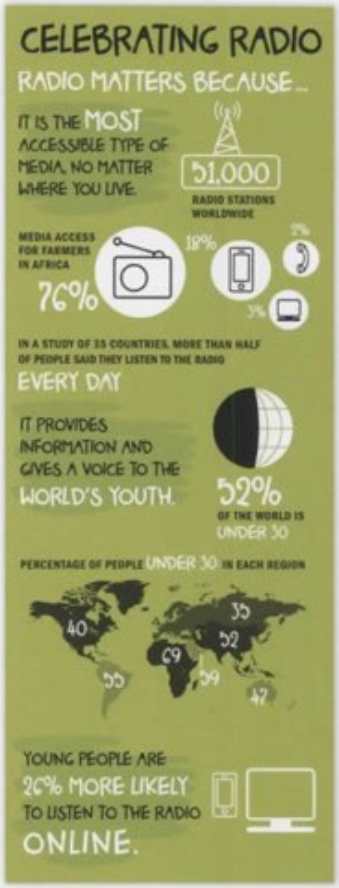
4. per cent / population / under 30
Fifty-two per cent of the world's population is under 30.

5. per cent / Africans / under 30
Sixty-nine per cent of Africans are under 30.

2 **Work in groups.** Make predictions about life in 20 years. Choose a topic and talk about it using an expression of quantity.



Go to page 157.



Warm Up

- **Build background** Say *Put your hand up if you listened to the radio today.* Say *The number of students who listened to the radio today is (seven).* Then say *Put your hand up if you listened to the radio yesterday.* Make a different observation. Say *(About two-thirds of) the class listened to the radio yesterday.*

Present

- Tell students to open their books at page 36. Say *We use words and phrases called* quantifiers *when we talk about quantities or amounts or numbers of things.* Ask a student to read the grammar point aloud. Say *We can talk about specific fractions or per cents of a quantity. We can also use words and phrases such as* most, the majority of, a number of *and* the number of.

- Play **Track 028** and tell students to read along silently. Say *When we talk about a quantity that is singular, we use the singular verb* is. *When we talk about a quantity that is plural, we use the plural verb* are.

- Write on the board:

singular quantity	plural quantity
population is ...	people are ...
class is ...	students are ...
team is ...	players are ...

- List on the board: *half of, fifty per cent of, a lot of, two-thirds of, the majority of* and *most.* Say *When we use expressions of quantity like these with a singular quantity, we use a singular verb. When we use them with a plural quantity, we use a plural verb.*

- Next, write *The number of ... is* on the board. Say *The number of refers to one number, so we use a singular verb.* Then write *A number of ... are* on the board. Say *A number of refers to any number that is more than one, so we use a plural verb.*

- Replay **Track 028**. Tell students to listen carefully as they read along.

Practise 1

- 1 Direct students to Activity 1. Tell them to read the graphic on their own or invite individuals to read aloud the information. Say *Now let's do item 1 together. The given words are* over half, population *and* every day. Ask *Which sentence in the graphic talks about listening to the radio every day?* (In a study of 35 countries more than half of people said they listen to the radio every day.) *How can we write a sentence about this information using the singular quantity* population *instead of the plural quantity* people? (Over half of the world's population listens to the radio every day.) Say *We use the singular verb* listens *with the singular quantity* population.

- Tell students to complete items 2–5. Review answers as a class.

Apply 2

- 2 Put students into groups of three or four. Tell groups to cut out the game board on page 157. Say *Make a prediction about what life will be like in 20 years. Choose a topic at the top of the game board. Then use a word or phrase in the column to make a prediction. Make sure you use an expression of quantity in your prediction.* Ask a student to read aloud the text in the speech bubble as a model.

- Say *Take turns. For each correct sentence, you score the number of points on the left. For example, the sentence in the speech bubble uses the word* computers *in the category* School, *so it scores 300 points. If your sentence is incorrect, the person to your right can try and, if correct, get the points.* Tell group members to keep score and cross out a category when all the words have been correctly used in a sentence. Play until all the words and phrases in each category have been used. The person in the group with the most points wins the game.

Extend

- Write on the board: *How much information do you get from the radio? How many of your friends listen to the radio regularly? How many of your family members listen to the radio regularly?* Put students into pairs. Say *With your partner, answer the questions on the board. Use expressions of quantity in your answers.* Model for students. Say *A number of my friends do not listen to the radio at all, but a lot of my family members listen to the radio every day.*

- To conclude, hand out **Worksheet 4.2.5**.

Consolidate

- Tell students to look at the map of the world in the graphic on page 36. Invite students to use quantifiers to make a statement about people under the age of 30 in a particular region. For example, say *(Marta), use an expression of quantity to make a statement about people under 30 in North America.* Model a sample response. Say *(Marta) could say 'Less than half of the population of North America is under 30.' (Marta) could also say 'Forty per cent of the people in North America are under 30.'*

BE THE EXPERT

Grammar in Depth

There are some general rules of subject/verb agreement that apply to quantifiers. For example, some rules used for expressions of quantity in this lesson are:

A fraction of an uncountable or a singular noun takes a singular verb.

Less than half of the information collected is available online.

A fraction of a plural noun takes a plural verb.

Three-quarters of the volunteers are teenagers.

A number (unspecified number) of a plural noun takes a plural verb.

A number of volunteers are from Asian and European countries.

The number (specified number) of a plural noun takes a singular verb.

The number of volunteers is 3,000.

Teaching Tip

Students may disagree about whether or not an answer is correct when they play a game. Encourage students to work it out on their own. Explain that you will help them with disagreements but that if you do, the student who is incorrect will lose a turn.

Formative Assessment

Can students

- use quantifiers to express amounts?

Tell students to use the quantifiers *a lot of* and *the number of* to make two different statements about students in their school.

Workbook For additional practice, assign Workbook pages 18–19.

Online Workbook Grammar 2

WRITING

Objectives

Students will

- identify and use elements of persuasive writing.
- express their opinion or point of view with supporting phrases.
- analyse a model of persuasive writing.
- write a persuasive essay to convince others to participate in a community service project.

Writing Persuasive essay

Academic Language *based on, equally important, equally necessary, especially, graphic, it's clear that, opinion, persuasive, point of view*

Content Vocabulary *audience, issues, programming*

Resources Online Workbook/Workbook page 20; Process Writing Worksheets 1–5, Genre Writing Worksheet 6: Persuasion (Teacher's Resource CD-ROM/Website); CPT: Writing



WRITING

In persuasive writing, you express your opinion or point of view about something important to you and support it, using phrases like:

based on	equally important/necessary
especially	It's clear that

1 **Read the model.** Work in pairs. How does the writer persuade the reader? Underline the words and phrases.

Did you know that 13th February is UNESCO's World Radio Day? On World Radio Day, UNESCO encourages young people to get involved with their local radio stations, get on the air and even create their own programmes. UNESCO believes it is especially important that there be more 'radio by youth, for youth'. This will help young people to get connected with one another and learn about the world around them.

More people have access to radio than to TV, computers or phones. A number of people can only get information on what is happening in the world from the radio. Equally important, there is almost no programming that targets young people, and yet we make up the majority of the population in many parts of the world.

Radio Tumaini, in Dar es Salaam, Tanzania, is one of the few stations that has a youth programme. Based on what workers and teen presenters say, the programme is a success. Young people are able to use radio to talk about topics that they care about, and listeners especially like hearing the teens talk about their experiences.

It's clear that we need to get involved in radio and make talk shows about issues that are important to us. Let's become reporters and tell the stories we think are important. There is an audience out there, waiting to hear what we have to say.

2 **Work in pairs.** Look again at the graphic on page 36. What other persuasive information about youth and radio could the writer have included in this paragraph?

3 **Write.** Persuade your readers to take part in a local or global community service project.

Warm Up

- **Activate prior knowledge** Write on the board:

> You want your parents to allow you to stay out later on weekend nights.
>
> You want to persuade town officials to expand the size of the animal shelter.

- Say *When we want to change a situation or we want something to happen, we can try to persuade other people to agree with us. Suppose you want your parents to allow you to stay out later on weekend nights.* Ask *Would you talk to them or write to them?* (talk) *What would you say?* (I always let you know who I'm with and where I am. I come home when I'm supposed to. I'm responsible.)
- Say *Now suppose that you read an article about overcrowding at the local animal shelter.* Ask *Would it be better to talk to them or write to town officials?* (write)

Present

- Write on the board:

based on	equally important/necessary
especially	It's clear that

- Point to the phrases and say *You can use these words and phrases as you write to state your opinion and support your point of view.* Say *For example, you might write 'Based on the article that appeared in* (The Townsman) *on (16th September, 2015), there is no space left at the shelter to care for more animals.'*

- Say *Use the word* especially *when you want to emphasise a particular point. For example, 'It has been especially challenging for workers to find homes for the animals living at the shelter.'*

- Say *Use the phrases* equally important *and* equally necessary *to call attention to additional reasons that support your point of view. For example, 'Equally important, there has been a 25 per cent increase in the town's animal population since the shelter was built.' 'An equally necessary reason to expand the shelter is that there are no other animal shelters in the entire county.'*

- Say *Use the phrase* It's clear that *to purposefully state your opinion. This is a helpful phrase to use when you write your conclusion. For example, 'It's clear that the 40-year-old animal shelter is no longer capable of providing a safe and secure place for the caretaking and treatment of animals.'*

- Tell students to open their books at page 37. Review the box with the class.

Read the Model 1 2

- 1 Say *Now we're going to look at an example of persuasive writing. First let's look at the photo. What do you think the writing might be about?* (a student working at a radio station)

- Read the instruction aloud. Put students into pairs. Say *Work with a partner. Look for words and phrases that the writer uses to persuade the reader of his or her point of view. Look back at the words and phrases in the box at the top of the page if you need to.*

- Tell partners to underline words and phrases that the writer uses to convince readers of his or her opinion. (*especially, Equally important, Based on, It's clear that*)

- 2 Ask *What is the writer trying to persuade readers to get involved with?* (their local radio stations, creating radio programming) Ask *Who is the writer's audience? Who does the writer want to get involved?* (teens) Say *Now read the text again. Then look back at the graphic on page 36 in your book. Find information in the graphic that the writer could also use to persuade teens to get involved with radio.*

- Invite partners to share with the class the additional information they identified in the graphic. Students' responses may include information such as the following: *More than half of the people in the world are under 30. About a quarter of young people listen to the radio online. Almost 70 per cent of the population of Africa is under the age of 30.*

- **Worksheet** If your students need a reminder of the elements of the Persuasive Writing genre, you may want to hand out the **Persuasion Genre Writing Worksheet** and review it together.

BE THE EXPERT

Writing Support

Usage Components of a persuasive essay often include the following: a clear statement of the subject, the opinion held by the writer, statements that contain logic and reasoning, facts and examples that support the writer's opinion, language directed to the intended reader and wording that is precise and powerful.

Our World in Context

UNESCO is an acronym for United Nations Educational, Scientific and Cultural Organisation. The organisation was founded in 1945 as part of the United Nations. It was created as a partnership among the nations of the world to advance education, science and culture. UNESCO's aims are to foster mutual understanding among people around the world, to spread education and culture and to disseminate knowledge.

Workbook For scaffolded Writing support, assign Workbook page 20.

Online Workbook Writing



WRITING

In persuasive writing, you express your opinion or point of view about something important to you and support it, using phrases like:

based on | equally important/necessary
especially | it's clear that

1 **Read the model.** Work in pairs. How does the writer persuade the reader? Underline the words and phrases.

Did you know that 13th February is UNESCO's World Radio Day? On World Radio Day, UNESCO encourages young people to get involved with their local radio stations, get on the air and even create their own programmes. UNESCO believes it is especially important that there be more 'radio by youth, for youth'. This will help young people to get connected with one another and learn about the world around them.

More people have access to radio than to TV, computers or phones. A number of people can only get information on what is happening in the world from the radio. Equally important, there is almost no programming that targets young people, and yet we make up the majority of the population in many parts of the world.

Radio Tumaini, in Dar es Salaam, Tanzania, is one of the few stations that has a youth programme. Based on what workers and teen presenters say, the programme is a success. Young people are able to use radio to talk about topics that they care about, and listeners especially like hearing the teens talk about their experiences.

It's clear that we need to get involved in radio and make talk shows about issues that are important to us. Let's become reporters and tell the stories we think are important. There is an audience out there, waiting to hear what we have to say.

2 **Work in pairs.** Look again at the graphic on page 38. What other persuasive information about youth and radio could the writer have included in this paragraph?

3 **Write.** Persuade your readers to take part in a local or global community service project.

Plan 3

- 3 Read Activity 3 aloud. Say *Now you're going to plan your writing. You already know your topic – persuading readers to take part in a local or global community service project. So your next pre-writing step is to focus your topic. Think about some organisations you know or do research to help you choose a community service project.*
- If necessary, tell students to use the Internet to research community service organisations. Students can use Activity 1 on Workbook page 20 to organise information about the organisation they choose.
- If you have time in class, allow students to work on this step. If not, assign it as homework. If students have Workbooks, remind them to use Workbook page 20 for writing support.
- **Worksheets** If your students need a reminder of any of the steps of process writing, hand out **Process Writing Worksheets 1–5** and review together.
- **Workbook** Refer students to Workbook page 20 to help them organise and plan their writing.

Write

- After students have finished their pre-writing, tell them to work on their first drafts. If needed, assign the first draft as homework.

Revise

- After students have finished their first drafts, tell them to review their writing and think about their ideas and organisation. Tell each student to consider the following: *Is the community service organisation clearly identifiable? Is my opinion clearly stated? Is specific information that supports my point of view included? Are the ideas connected in a logical way? What seems good? What needs more work?*

Edit and Proofread

- Remind students to consider elements of style, such as sentence variety, parallelism and word choice. Then remind them to proofread for mistakes in grammar, punctuation, capitalisation and spelling.

Publish

- Publishing includes handing in pieces of writing to the teacher, sharing work with classmates, adding pieces to a class book, displaying pieces on a classroom wall or in a hallway and posting on the Internet.

Writing Assessment

Use these guidelines to assess students' writing. You can add other aspects of their writing you'd like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

	1	2	3	4
Writing Student organises details that persuade in an effective way. Student uses appropriate words and phrases to persuade, such as *based on, equally important/necessary, especially* and *it's clear that.*				
Grammar Student uses quantifiers.				
Vocabulary Student uses a variety of word choices, including words learnt in this unit.				



MISSION

Objective
Students will
- discuss ways technology is used to help people today and how it will be used to help people in the future.

Content Vocabulary *lifesaving*

Resources Video scene 2.2 (DVD/Website/CPT); Worksheet 4.2.6 (Teacher's Resource CD-ROM/Website); Online Workbook: Meet the Explorer; CPT: Mission

BE THE EXPERT

Teaching Tip

When students work in pairs, ask them to signal to you when they have finished their work. Consider asking partners to put their hands up or turn over a card on their desk when they finish. This will help you keep track of students' progress and let you know when it's time to move on to the next activity.

Online Workbook Meet the Explorer

Mission

- Ask a student to read aloud the quote by Patrick Meier. Say *You've learnt about Patrick Meier.* Ask *What do you think he means by* use technology to make a positive, lifesaving difference? (use technology to help save people's lives and to change a situation for the better)

- **Activity 1** Say *Now let's watch a video about Patrick Meier.* Play **Video scene 2.2**. Tell students to focus on Patrick's support of digital humanitarians and how they empower people around the world to help themselves.

- **Activity 2** Put students into pairs. Tell partners to discuss ways they've used technology to help someone. Then ask them to consider and discuss whether they are more likely to help others affected by a natural disaster in the future because of the ways that technology makes it easier to help. Tell students to use future tenses in their discussion.

- **Activity 3** Tell students to consider on their own how they currently use technology to connect with people worldwide. Then tell them to think about how changes to technology or to the way they use it, might be different in the future. Tell students to use future tenses in their responses. Model an example. Say *Now I text people in other countries when I play games on the Internet. Twenty years from now, I will be playing 3-D virtual reality games with people in other countries.*

- **Worksheet** Hand out **Worksheet 4.2.6**. Explain that students will use the worksheet to further discuss ways to use technology to help others.

PROJECT

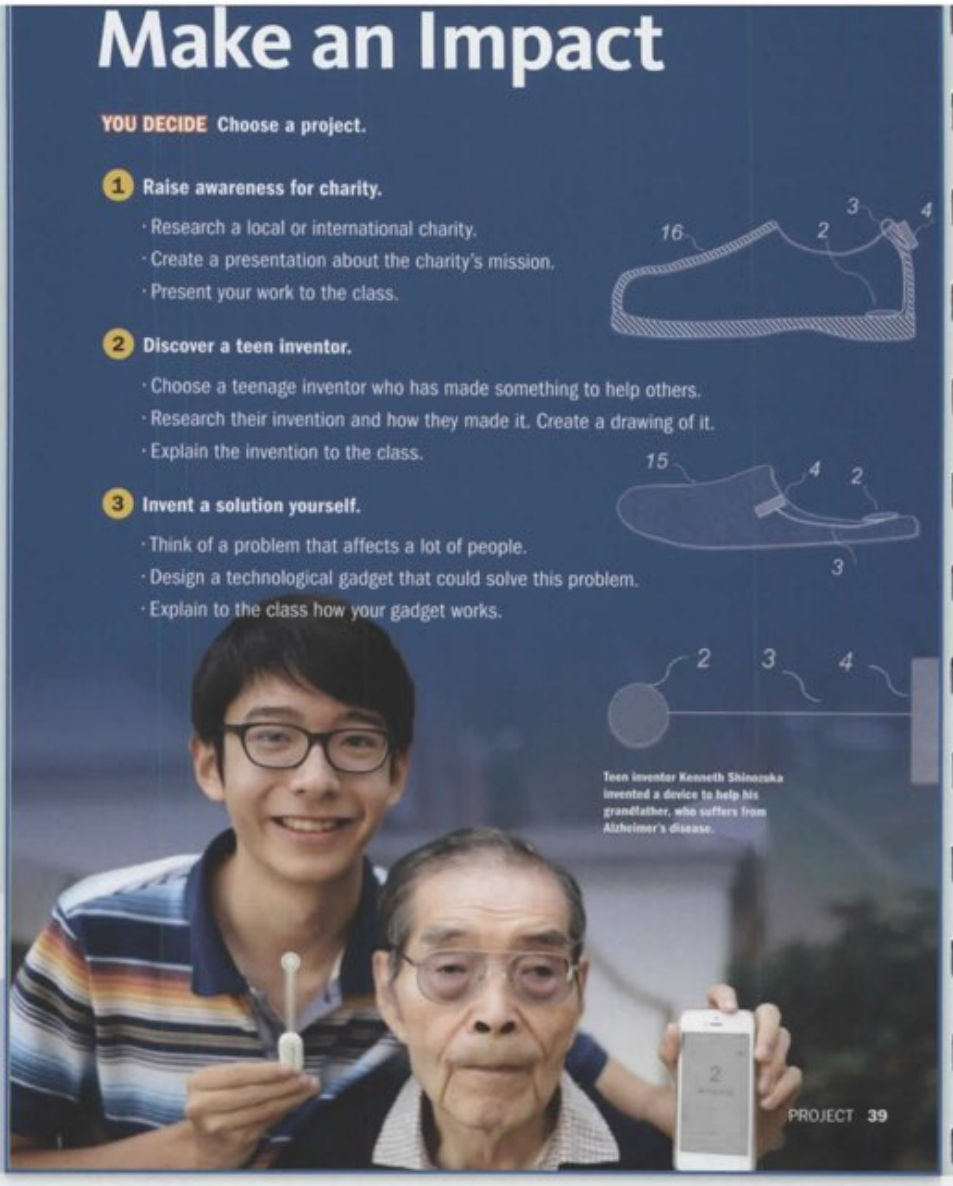
Objective
Students will
- choose and complete a project related to helping others.

Academic Language *solution*

Content Vocabulary *Alzheimer's disease, awareness, charity, gadget*

Resources Assessment: Unit 2 Quiz; Workbook pages 21 and 91; Worksheet 4.2.7 (Teacher's Resource CD-ROM/Website); CPT: Make an Impact and Review Games

Materials audio recording device *(optional)*, video recording device *(optional)*



Assessment Go to page 255.

Unit Review Assign Worksheet 4.2.7.
Workbook Assign pages 21 and 91.
Online Workbook Now I can

Prepare

- YOU DECIDE Ask students to choose a project.
- **Activity 1** Ask students to consider visiting or volunteering with a local charity on a few occasions in order to get a bigger picture of what the charity does. Students might even consider volunteering with an international charity if there are opportunities to do so locally or via the Internet. Remind students to gather information on different ways the charity helps others, including any uses of technology.
- Tell students to consider the type of presentation they will create. A multimedia presentation with video and audio can be an effective tool to raise awareness.
- **Activity 2** Tell students to research teenage inventors and their inventions on the Internet.
- Students can draw a picture of the invention by hand or by using a computer or other technology. Students' explanations should clearly describe the inventor's thinking process and the steps the inventor used to create the invention.
- **Activity 3** Tell students to brainstorm large scale problems, such as air pollution. Students' gadgets should use technology available today.

Share

- Schedule time for groups to present their final projects to the class.
- **Modify** For Activity 3, students can use an existing online game that contributes to solving a world problem instead of inventing their own gadget. Online games such as the following help to solve real-world problems: *Free Rice* – helps solve world hunger by donating rice grains; *Malaria Spot* – uses crowdsourcing to diagnose malaria; *Eyewire* – uses crowdsourcing to map brain neurons involved in vision.

STUDENT'S BOOK AUDIO SCRIPT

Track 015 1 **Listen and read.** See Student's Book pages 26–27.

Track 016 2 **LEARN NEW WORDS** **amount** / After a disaster, large amounts of water and food must be delivered to the scene. **the big picture** / You are one person, but you can make a difference in the big picture. **crisis** / Hurricanes can cause a major crisis. **crowdsourcing** / Crowdsourcing information and advice is a good way to use technology. **data** / Analysing data can help us to better understand what's happening. **evidence** / Crisis mapping is evidence that anyone can help those in need. **expand** / Technology allows people to expand their knowledge. **generate** / Computers can analyse information and generate solutions. **humanitarian** / Humanitarians want to help other people. **measure** / It's difficult to measure the level of destruction of a large earthquake. **monitor** / Rescuers can use technology to monitor conditions after a disaster. **process** / Computers can process information more quickly than humans. **upload** / When you upload a photo to the Internet, anyone can see it.

Track 017 4 Patrick Meier uses crisis maps and social media to organise information and give the big picture on what's happening at a disaster site. However, scientists are using other forms of technology to collect data, to generate solutions and to help people in need. Some scientists are developing microbots to explore where humans cannot easily go, such as outer space or inside the human body. Microbots are simple machines, but when released in large amounts, they can accomplish a lot. If sent into a disaster area, scientists could monitor their movements and measure their progress while they search for evidence of life. If one microbot gets lost, the mission could still continue.

Track 018 5 In times of a disaster, collaboration between people on the ground and online is very important. People can exchange information to provide online updates, which can be sent to rescuers. With this information, rescue workers can better understand the situation and co-ordinate to provide quick and effective relief to the victims.

Track 019 5 **LEARN NEW WORDS** **collaboration** / In emergencies, collaboration among rescue workers is very important. **co-ordinate** / Technology helps workers co-ordinate their efforts. **relief** / Food, blankets and water can provide relief to victims of disaster. **situation** / The earthquake has created a dangerous situation in the city. **update** / The latest update shows new information.

Track 020 **SPEAKING STRATEGY** See Student's Book page 29.

Track 021 1 **S1**: Hi John. Did you hear the terrible news about last week's earthquake? I want to help somehow. **S2**: Yes, it is terrible. I would like to help, too. Do you have anything in mind? **S1**: What if we volunteered with a rescue organisation? **S2**: Wouldn't it be best to wait until summer? Hey, I know ... what if we became digital humanitarians? Then we could start now! **S1**: Great idea! Digital humanitarians look at photos and messages from disaster areas and evaluate them for crisis mappers, don't they? **S2**: Yes, all we have to do to get started is join their email list. If we're serious about helping, that's a good place to start. Should we sign up then? **S1**: Sure, why not?

Track 022 **GRAMMAR** See Student's Book page 30.

Track 023 1 Predictions. Every year, the world's population is growing. And it seems we are experiencing bigger and more dangerous natural disasters. Some are the result of climate change. Others, like earthquakes and volcanoes, are happening simply because it's part of their natural cycle. This timeline shows some predictions that scientists have made for the future:

- By 2020, an 8.5 magnitude earthquake will have hit South America.
- In 2030, the world population will reach around 8.3 billion people. But, thanks to new technologies, food supply will be up and world hunger levels will be going down.
- By 2050, many regions in the world will have been flooded because of rising sea levels.
- Towards the end of the century, a massive asteroid will be entering the Earth's orbit.

Will these predictions become reality? And are we prepared if they do?

Track 024 4 **LEARN NEW WORDS** **cause** / He wants to give to a good cause, so he helps the homeless. **donate** / If you don't have money, you can donate your time. **fundraiser** / A cake sale is a great idea for a fundraiser. **network** / She joined a network of people who keep the streets clean. **volunteer** / You volunteer to help others online or in your community.

Track 025 5 **S1**: Hey, have you thought about what kind of community service activity you'll do in order to graduate? **S2**: My teacher gave me a list of suggestions. If you want, we could do something together. **S1**: Great idea! Here's one: We could donate old toys to a children's hospital! I've got loads in my room that I used to play with when I was little. **S2**: Yeah, but they shouldn't be too old or the hospital won't take them. Wouldn't it be better if we volunteer our time? We could clean up the beach or help put books back on the shelves at the library? **S1**: I like the beach idea. Nobody goes there anymore because it's so dirty. What if we talk to our friends and create a whole network of volunteers! We could even hold a fundraiser to pay for the cleaning supplies! **S2**: Sounds like a worthy cause. Let's do it!

Track 026 2 **LEARN NEW WORDS** **empower** / Role models can empower teens to make a difference. **engineer** / It is possible to engineer a new device using old parts. **face** / Today's young people face many challenging situations. **generation** / Many teens work to provide a better world for future generations. **innovation** / New innovations can improve the lives of many people.

Track 027 3 **WHILE YOU READ** See Student's Book pages 32–33.

Track 028 **GRAMMAR** See Student's Book page 36.

Track 029 1 **Express Yourself** See Student's Book pages 40–41.

S1: An earthquake hit Nepal today. Many people are still trapped where rescue teams are unable to reach them. **S2**: I must save them! **S3**: When Crisis Crusher arrives in Kathmandu, he starts lifting crumbling buildings to free those who are trapped. But he still hears cries for help in the distance. **S4**: Help! **S2**: How will I reach everyone in time? How will I know where they are? **S3**: Meanwhile, in Tokyo, a girl begins receiving tweets from people in Nepal. She collects their locations and shares the information. **S5**: Time to start mapping! **S3**: When CrisisMapperMC receives the information, he starts creating a crisis map. **S6**: Here you go, Crisis Crusher: your next rescue. **S3**: With the latest updates, Crisis Crusher is ready to rescue.

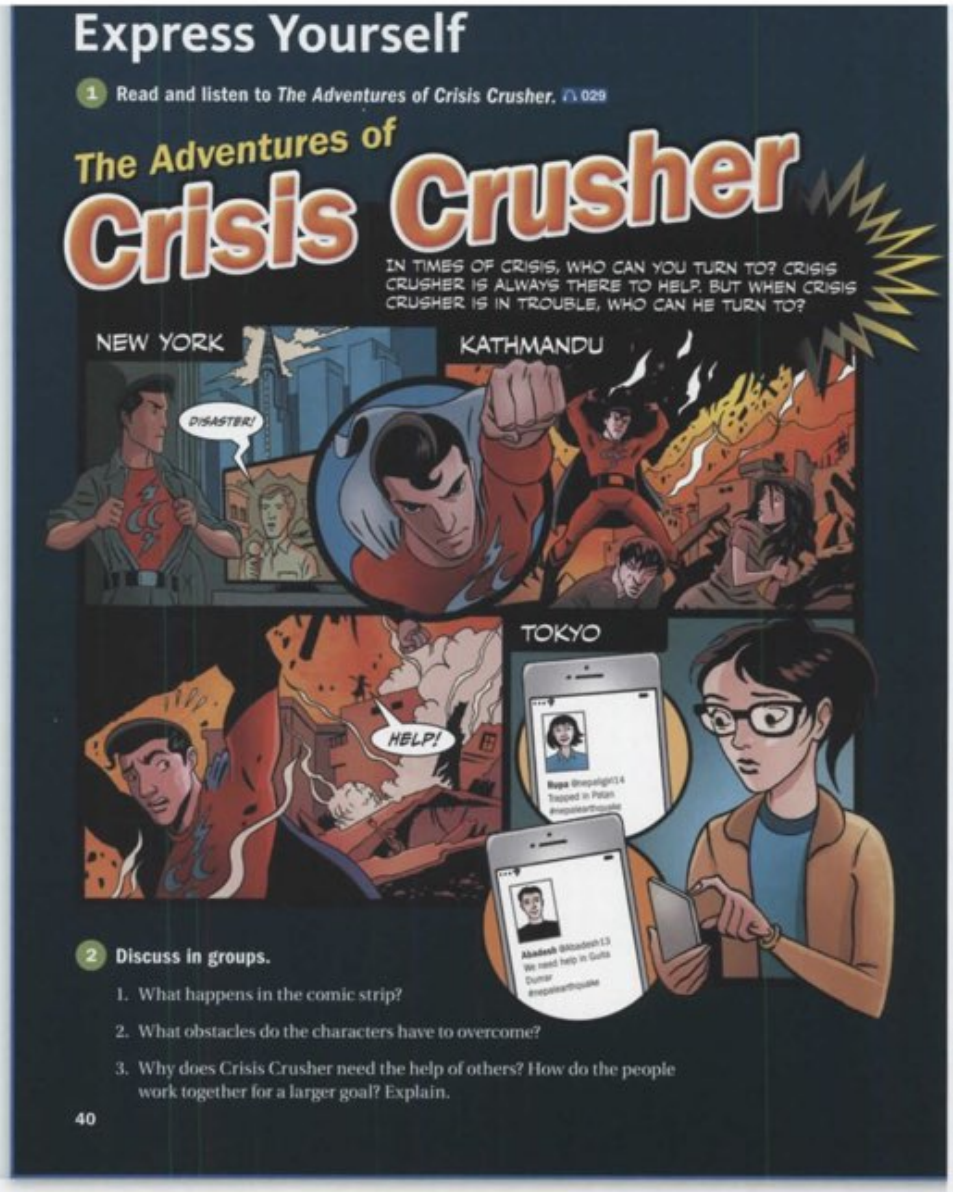
Express Yourself

Objectives
Students will
- identify elements and content of a graphic novel.
- connect ideas about how people push themselves to achieve personal goals and work with others to achieve a common goal.

Academic Language *character, comic strip, express, scene, theme song*

Content Vocabulary *accomplish, purpose*

Resources Workbook pages 22–23/ Online Workbook (Units 1–2 Review); Worksheet 4.2.8 (Teacher's Resource CD-ROM/Website); Track 29 (Audio CD/Website/CPT); CPT: Express Yourself Units 1–2



Present 1

- **Preview** Tell students to turn to pages 40–41. Say *Look at the images in this story.* Ask *Has anyone seen a story that looks like this before? What is this kind of story called?* (comic strip, comic book, graphic novel) Say *Look at the characters in the images.* Ask *Who do you think the characters are?* (superhero, teenage girl, teenage boy in a wheelchair) *What kinds of technology can you see in the images?* (smartphones, laptop, smartwatch)

- 1 **Read together** Say *We're going to hear and read a story about achieving goals.* Read the title aloud. Explain that *to crush* means 'to use force to overcome someone or something'. Ask *What do you think a Crisis Crusher might do?* (use force to overcome a crisis) Tell students the story is fantasy fiction, which has one or more imaginary characters who may have supernatural powers. The characters and events in the story are made up. Some events are not believable, but the characters may behave like real people. Say *This story couldn't happen in real life. Real people don't have superpowers.* Play **Track 029** once as students listen and read along.

Practise 2

- 2 **Discuss** Tell students to form small groups. Say *Now we're ready to talk about the story. Answer Question 1. Remember to consider what happens in the beginning of the story, the middle and the end. Also, identify the problem in the story and how it gets solved.* When everyone has finished, ask *Who liked the story? Who disliked it?*

- Say *Now answer Question 2.* As students discuss, walk around the room to check their understanding. Say *Remember to ask yourselves 'What is the first obstacle Crisis Crusher has to overcome? the second obstacle?'*



BE THE EXPERT

Problem and Solution

Explain that fiction stories usually have a problem and solution. One or more of the characters encounter a problem at the beginning of the story. The rest of the story includes events that show how the characters solve the problem and bring it to a resolution.

Cumulative Review

Hand out Cumulative Review Worksheet 4.2.8.

Formative Assessment

Can students

- identify elements and content of a story?

  Ask students to identify the characters and the problem in the story. (Crisis Crusher, TokyoTeen2015 and CrisisMapperMC; people in different parts of the world need help after disasters)

- explain why people push themselves to achieve personal goals and work with others to achieve a common goal?

  Ask *What is one reason that people push themselves to physical or mental limits to overcome obstacles? What is one reason that people work together to overcome obstacles?*

Workbook Assign pages 22–23
Online Workbook Units 1–2 Review

and so on. Ask *Do any of the other characters have to overcome obstacles?*

- Say *Finally, answer Question 3.* Remind students that in Unit 1, they discussed how people pushed themselves to their physical and mental limits to achieve a goal. Ask *Why can't Crisis Crusher help all by himself? What can Crisis Crusher achieve by working together with other people?*

Connect 3

- 3 **Critical thinking** Read the Activity 3 text aloud. Tell students to begin their discussions. As students discuss, walk around the room to check their understanding and the logic of their ideas. Provide prompts as necessary: *Think about the things that Crisis Crusher was able to do by himself and about the things he could do only with the help of TokyoTeen2015 and CrisisMapperMC. Think about Patrick Meier and how he believes that people using technology and working together can empower others around the world to help themselves.*

- When time is up, ask *Why can you push yourself to the limit to reach a goal, but need the help of other people to see the big picture and achieve a shared goal?* Ask students to share their ideas with the class.

Prepare 4

- Review the instructions for Activity 4. You may want to assign this activity in advance so that students have more time to work on it in class or at home.

- 4 YOU DECIDE Tell students to choose an activity. Provide assistance to students who choose to draw the final scene or create a theme song.

Share

- Set aside time for sharing students' work with the class.

In This Unit

Theme This unit is about food sustainability.

Content Objectives
Students will
- describe how the globalisation of food affects society and the environment.
- identify ways to eat responsibly.
- describe how awareness of the food they eat, the way it is produced and where it comes from can have positive social and environmental benefits.

Language Objectives
Students will
- talk about food sustainability.
- offer, accept or decline advice.
- use mixed conditionals to express how things would be different.
- use double comparatives to describe outcomes.
- write a review of their favourite restaurant.

Vocabulary
pages 44–45 *commercial, conservationist, convenient, diverse, globalisation, harvest, impact, local, packaged, reflection, taste, wholesome*
page 46 *attitude, grateful, main course*
page 49 *protein, recipe, restore, revolutionary, spice*
page 50 *consistent organic, sustainable, vertical*
Vocabulary Strategies Borrowed words; Use context of unit

Speaking Strategy Offering advice and accepting or declining advice

Grammar
Grammar 1 use mixed conditionals to express how things would be different
Grammar 2 use double comparatives to describe outcomes

Reading *Grow It Here, Eat It Here*
Reading Strategy Connect text to prior knowledge

Video Scene 3.1: *Should We Eat More Bugs?*; Scene 3.2: Meet Barton Seaver

Writing Restaurant review

National Geographic Mission Know Your Food

Project
- Sustainable lunch menu; Chef profile; Cooking show

Pronunciation The *ar* sound

Pacing Guides 4.3.1, 4.3.2, 4.3.3

Unit 3

Food Matters

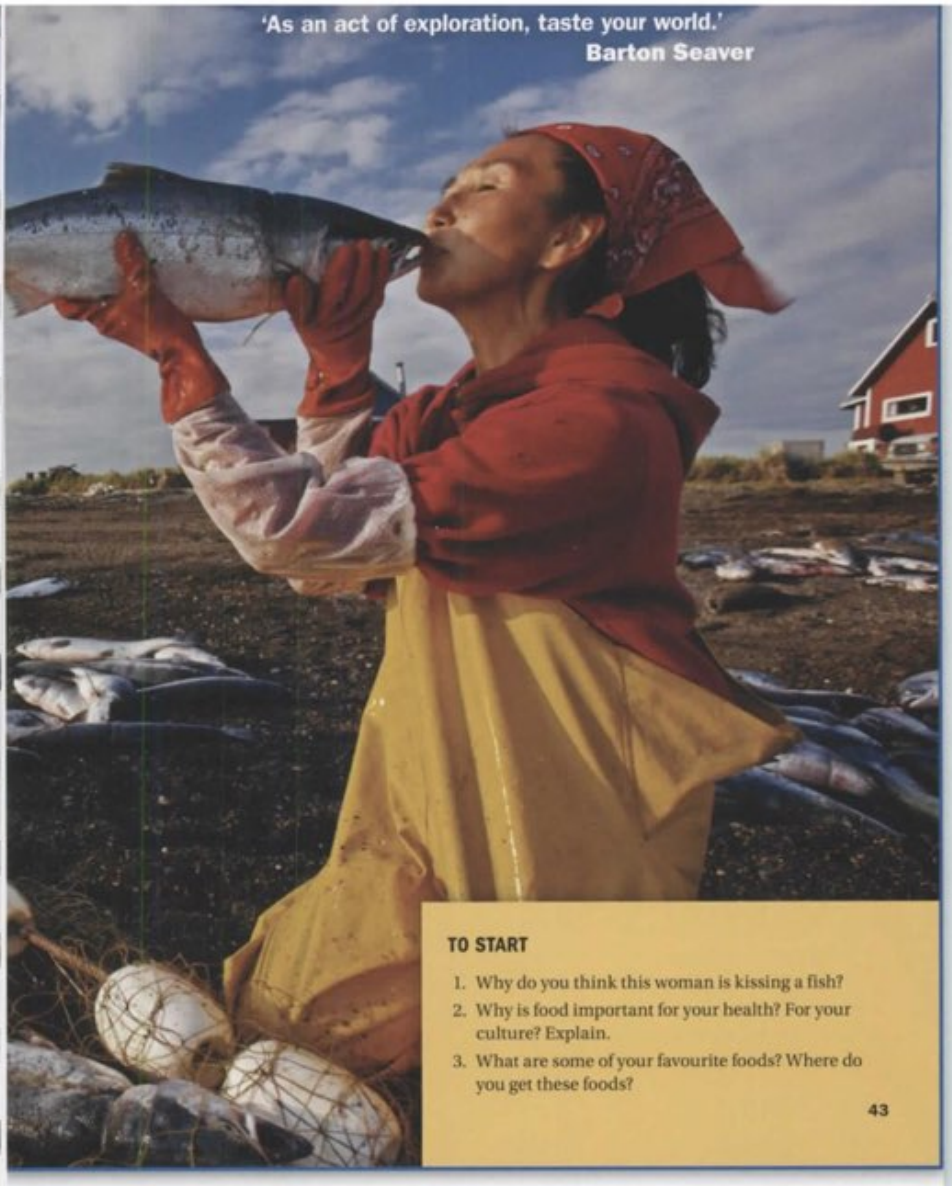


Introduce the Unit

- **Activate prior knowledge** Ask *Have you ever been fishing? Where did you go? What kind of equipment did you use?* Invite students to talk about the places they've fished and the types of fishing tackle they used. Then ask *Did you catch any fish? What kind of fish did you catch or hope to catch? What did you do with any fish you caught?* Invite students to talk about their fishing experiences.

- Tell students to open their books at pages 42–43. Ask a student to read aloud the unit title. Ask *What can you see in the photo?* (a woman kissing a fish) Ask a student to read aloud the quote by Barton Seaver on page 43. Say *Barton Seaver believes that, in order to explore the world, you should taste things in the world. Do you agree? Have you ever thought of tasting as a way to explore the world?*

- Ask a student to read aloud Question 1 on page 43. Say *Let's talk about some reasons the woman is kissing a fish.* List on the board reasons that students give.



- Share with students the information in About the Photo. If possible, use a map or globe to show students the location of Bristol Bay in the Bering Sea west of Alaska, United States.
- Ask questions such as these to encourage further discussion:
  What type of fish has the woman caught?
  How did the woman catch the fish?
  What is the woman planning to do with all the fish she caught?
- Ask a student to read aloud Question 2. Say *Think about why your body needs food. Think about ways that food is used in your culture.* Ask *Do celebrations and other important events involve food?*
- Ask another student to read aloud Question 3. Encourage students to name a variety of food and to talk about where they purchase the food, as well as where it actually comes from.

Extend

- Hand out **Worksheet 4.3.1**. Put students into pairs. Explain that partners will be writing about and discussing the importance of food in people's lives.

UNIT OPENER

Objectives
Students will
- discuss the type of food shown in a photo.
- discuss the importance of food to individuals and society.
- discuss where food comes from.

Resources Worksheet 4.3.1 (Teacher's Resource CD-ROM/Website); CPT: Unit Opener

Materials world map or globe *(optional)*

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About the Photo

The woman, Ina Bouker, is a Yupik native. The Yupik are indigenous Arctic people. The photo was taken near Bristol Bay, Alaska. The Bristol Bay region produces the most sockeye salmon in the (commercial) world. The woman in the photo caught the salmon using a set net. A set net is a type of fishing net with one end anchored on shore and the other end anchored in the water.

Teaching Tip

It's important to give all students an opportunity to speak in class. When you ask questions, avoid always asking the most eager student. Invite as many students as possible to answer so that every student has an opportunity to speak.

Related Words

bandana, float, net, rubber gloves, 4x4

VOCABULARY

Objectives

Students will

- identify and use vocabulary related to the globalisation of food production and people's connection to food.
- use new vocabulary to read about and discuss food sources, food choices and food awareness.

Target Vocabulary *commercial, conservationist, convenient, diverse, globalisation, harvest, impact, local, packaged, reflection, taste, wholesome*

Content Vocabulary *available, break down, chef, crop, environment, immigrant, overfished, preference, species, transport*

Resources Tracks 030–031 (Audio CD/ Website/CPT); CPT: Vocabulary



1 Where does our food come from? Why does it matter? Discuss. Then listen and read. 030

What did you eat for breakfast this morning? For dinner last night? You might have mealtime routines that are the same – or almost the same – each day. But did you ever stop and think about the connection you have to food?

In the past, people often grew their own crops and raised their own animals. Once the food was **harvested**, they worked together to get the food to the table. This collaboration helped people to connect with one another, and with the food they prepared.

Harvesting food

Chef and **conservationist** Barton Seaver realised at a young age that food is part of the human experience. As a child, Barton lived in a **diverse** community. Immigrants who lived there brought foods from their cultures with them. Barton's parents cooked with these foods, and Barton was grateful to be able to explore the world right from his kitchen. He learnt that food is a **reflection** of culture: it's part of who we are.

Today, this connection between food and people is breaking down. **Globalisation** allows food to be shipped anywhere in the world. Since you can buy

44 VOCABULARY

Modern industrial farming

Warm Up

- **Activate prior knowledge** Play a simple word-association game with students. Say *I'm going to name a type of food and I want you to tell me what it makes you think of. Try to use as few words as possible in your answers.* Then say and write on the board words and phrases such as: *apple* (fruit; snack), *lettuce* (green; salad), *steak* (dinner; meat), *rice* (dinner; lunch).
- After students have brainstormed a list of associations, ask them to use the words on the board to develop context sentences. Model an example for students. Point to (*lettuce*) and say *Many people like to eat lettuce in a salad for lunch.*

Present 1 2

- Tell students to open their books at pages 44–45.

Ask a student to read aloud the Activity 1 questions at the top of page 44. Say *We've talked about different kinds of food. Now let's list some places where our food comes from and why it matters where our food comes from.*

- Write the following on the board:

> _____ comes from _____.
>
> It matters where _____ comes from because _____.

Ask several students to take turns completing the sentence frames orally in complete sentences. (Sample answer: Lettuce comes from a farm. It matters where lettuce comes from because a farm can provide food for a lot of people.)



according to your **tastes**, there's no need to wait until foods become available. And you don't have to spend hours preparing meals as a family. Foods have been prepared and **packaged** to be more **convenient**. Although they make life easier, these foods are not as **wholesome** as fresh, **local** foods. Packaging and transporting foods also **impacts** on the environment.

Barton studies the effects of our food choices on the environment, especially the oceans. He understands that we have preferences about seafood, and that fishermen try to get us what we want. But **commercial** fishing has upset the ocean's ecosystem, and Barton is working to help people change their attitudes about food so that they make better choices.

So, the next time you sit down to a nice main course of fish and vegetables, think about what you're eating. Are the vegetables from a nearby farm or from across the world? Is the fish on your plate an overfished species? Enjoy your dinner, but don't ignore where it comes from. Remember, your choices count!

2 **LEARN NEW WORDS** **Listen and repeat.** 031

3 **Work in pairs.** Describe what you ate and drank at your last meal. Was it wholesome? Where do you think this meal came from? What impact do you think it had on the environment?

VOCABULARY **45**

BE THE EXPERT

About the Photo

This photo shows combine harvesters harvesting wheat into a tractor in a rural field.

Teaching Tip

Give multiple examples when presenting a new concept or vocabulary word. For example, if students struggle with the meaning of a new word such as *diverse*, give additional examples of diverse situations (diverse opinions about a topic; diverse interests such as painting and skiing; a diverse audience made up of people of all ages) until students see a pattern. This will help them apply the new word to a variety of situations and contexts.

Related Words

combine harvester, hay bale, horse and cart, scarecrow, tractor, windmill

- **1** Play **Track 030** and tell students to listen and read. Discuss the reading with students. Ask questions such as:
  How did people in the past usually get food?
  Why is eating packaged foods not always a good choice?
  How has commercial fishing harmed the oceans?
- **2** **LEARN NEW WORDS** Play **Track 031**. Tell students to listen and repeat. Then tell partners or small groups to take turns saying each word. Ask them to think of a true or false statement that includes the target word. Ask the class to decide whether the statement is true or false.
- Say *Use each word in a true or false statement. Your classmates will decide whether the statement is true or false. If the statement is false, the student who disagrees with it will restate it to make it true. If it's true, the student will agree with you and re-state the true statement.*
- Model an example for students. Say *A diverse community has immigrants from only one culture. True or false?* (false) Ask a student to restate the example so that it becomes a true statement. (A diverse community has immigrants from many different cultures.)

Practise 3 4 5

- **3** Put students into pairs. Say *Take a few minutes to think about the last meal you ate. Then read the Activity 3 questions on page 45.* Tell partners to ask and answer the questions in Activity 3. Say *Try to use your new words as you and your partner answer the questions.*

VOCABULARY

Objectives
Students will
- practise using vocabulary related to the globalisation of food production and to their own connection to food.
- use a vocabulary strategy to learn new vocabulary.

Target Vocabulary *attitude, grateful, main course*

Vocabulary Strategy Borrowed words

Academic Language *definition, survey*

Content Vocabulary *awareness, creative, ingredient, region, species*

Resources Online Workbook/Workbook pages 24–25; Worksheet 4.3.2 (Teacher's Resource CD-ROM/ Website); Tracks 032–033 (Audio CD/ Website/CPT); CPT: Vocabulary

4 Read and write the words from the list. Make any necessary changes.

commercial	diverse	globalisation	harvest	impact
local	packaged	reflection	taste	wholesome

According to Barton, food is a ___reflection___ of our culture. He should know. Barton grew up in a very ___diverse___ community, where he learnt about different cultures through food. Barton sees food as a way to connect with people we know and people we don't know. Trying new foods can ___impact___ our relationship with people and help us understand other cultures. Barton also sees ___local___ foods as the best choice. Choosing from what's produced nearby makes us try new things, not just buy according to our ___tastes___. Although ___commercial___ farming and fishing offer a wide variety of foods in the supermarket, Barton wants us to avoid popular, overfished species, and instead try the 'catch of the day'. We should get creative with what is available to create unique, ___wholesome___ meals.

5 LEARN NEW WORDS Listen to these words and then match them to the correct definition. Then listen and repeat. 032 033

attitude	grateful	main course

___attitude___ 1. feeling or opinion
___main course___ 2. main part of a meal
___grateful___ 3. thankful



Commercial fishing

6 YOU DECIDE Choose an activity.

1. **Work independently.** Think about the food produced in your region and plan a main course that uses local ingredients. Present your meal idea to the class.
2. **Work in pairs.** Discuss what affects your food choices more: your own tastes or what foods are available to you. Do you make good food choices? Explain.
3. **Work in groups.** Create a survey of food awareness. Work together to write five questions about food. Conduct the survey in class. Then present the results.

- **4** Tell students to turn to page 46. Choose several students to read aloud the words in the word box. Ask them to choose two words and use them in a sentence. Then tell students to complete Activity 4 independently. Say *There are three extra words in the box that you won't use.* You could ask early finishers to write original sentences with the three extra words: *packaged, globalisation* and *harvest*. When students have finished, ask a student to read aloud the completed paragraph.
- **5 LEARN NEW WORDS** Play **Track 032** and stop the recording before the repetition of the vocabulary words. Tell students to listen and write each vocabulary word next to the correct definition in items 1–3. Then play the rest of **Track 033** and tell students to repeat each word and sentence. Review answers for items 1–3 together as a class. Then tell students to look for each word in context on pages 44–45.
- **Vocabulary Strategy** Ask students if they remember what jobs Barton Seaver has (chef and conservationist). Point out the word *chef* on page 45. Explain that the word is 'borrowed' from the French language. Write on the board:

French		French	English
chef de cuisine	→	chef	→ chef

Explain that, in French, a *chef de cuisine* is the head of the kitchen. In English, we use the term *chef* to mean someone who cooks in a commercial kitchen. We have also 'borrowed' the terms *sous-chef*, *chef de partie* and *commis chef*, who all have different responsibilities in a kitchen. Tell students that the word *attitude* is also borrowed from the French language. Its meaning is the same in both French and English.

Apply 6

- 6 YOU DECIDE Ask students to choose a project. Tell students to read Activity 6. Say *Choose one activity. You'll either work on your own, with a partner or in a group.* Give students time to read the three options and make their choices. Say *Try to use the new words you learnt.*
- Students who choose the first activity may need to research kinds of food that are grown and produced locally. Tell students to include a variety of local foods in their main courses.
- Tell students who choose the second activity to make lists of their own tastes in food and of available foods. Tell partners to use the lists in their discussions.
- Tell students who choose the third activity to re-read the text on pages 44–45 before writing their survey questions. Group members can work collaboratively on the survey questions and then have one student conduct the survey, another record the results and a third tally the results. Remind students to summarise their data in their presentations to the class.

Extend

- Tell students to choose a different option in Activity 6 and complete it. Arrange students in pairs or groups so each student has an opportunity to work on a different Activity 6 option.
- If time allows, hand out **Worksheet 4.3.2**. Explain that students will talk and write about how the globalisation of food impacts the environment. They will also write about how people's attitudes towards food are changing and about their own attitudes towards food.

Consolidate

- List all the vocabulary words from pages 44–46 on the board. Say *Imagine that you are Barton Seaver. Say a sentence using one of the words on the board. Say something about yourself or about what you believe.* Model an example. Say *I am grateful that I grew up in a community where there were many different kinds of foods.* Invite students to say sentences until all the words are used.

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Vocabulary Strategy

Borrowed words The English language borrows some words directly from other languages; others are variations. Some examples:

English		Other Language
restaurant	>	French *restaurer* 'to restore'
potato	>	Spanish *batata*
pasta	>	Italian *pasta*
ketchup	>	Malay *kĕchap* 'fish sauce'
guacamole	>	Mexican Spanish, from Nahuatl *āhuacatl* 'avocado' + mōlli 'sauce'

About the Photo

The photo shows a Canadian fisherman pulling in a full net of fish in the Northumberland Strait near Prince Edward Island on Canada's Atlantic coast.

Teaching Tip

You can use the time that students spend in group activities to re-teach struggling students. Notice which students have difficulty with new vocabulary and put them together in one group. Work with this group to give them additional instruction. You can provide extra support and correct any misunderstandings without drawing attention to struggling students.

Related Words

block and tackle, boat

Formative Assessment

Can students

- use new vocabulary related to the globalisation of food production and people's connection to food?

  Ask *How does commercial fishing impact the environment?*
- use new vocabulary to discuss food sources, food choices and food awareness?

  Ask *What's one reason to avoid eating too much packaged food?*

Workbook For additional practice, assign Workbook pages 24–25.

Online Workbook Vocabulary

SPEAKING STRATEGY

Objectives
Students will
- offer advice.
- accept or decline advice.

Speaking Strategy Offering advice; Accepting or declining advice

Academic Language *dialogue*

Content Vocabulary *sardine*

Resources Online Workbook; Worksheet 4.3.3 (Teacher's Resource CD-ROM/ Website); Tracks 034–035 (Audio CD/ Website/CPT); CPT: Speaking Strategy

Materials paper clips, pencils, scissors

SPEAKING STRATEGY 034

Offering advice	Accepting or declining advice
You should think about helping us in the community garden.	Actually, I was thinking we could work in the school's garden.
If I were you, I'd sign up for the school's gardening club.	Great idea! Thanks for the suggestion!
Why don't you try growing vegetables at home?	Thanks for the idea, but I prefer working in my grandfather's garden.



1 **Listen.** How do the speakers offer and respond to advice? Write the words and phrases you hear. 035

2 **Read and complete the dialogue.**

Possible answers:

Natalia: I'm so tired of eating the same old thing.

Alex: ___Why don't you try___ eating something different? What foods do you like?

Natalia: Well, I love chicken, bread, rice ...

Alex: ___If I were you___, I'd look for dishes from other cultures with those ingredients. Have you tried Indian food?

Natalia: No. ___Thanks for the idea___, but I don't eat spicy foods.

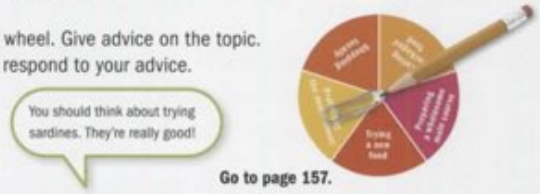
Alex: Not all Indian food is spicy. And many Indian dishes use chicken and rice. Indian bread, called *naan*, is really delicious, too!

Natalia: Really?

Alex: Really! ___Actually, I was thinking___ you could come over and try some Indian food at my house. My dad's making it tomorrow night.

Natalia: ___Great idea!___

3 **Work in groups.** Spin the wheel. Give advice on the topic. Listen as group members respond to your advice.



Go to page 157.

4 **Work in pairs.** You want to eat more responsibly. Listen and respond to your partner's advice on how to do so.

Warm Up

- **Activate prior knowledge** Say *Suppose your friend wants to get more exercise to keep healthy. What could you say to your friend to offer her suggestions?* (How about trying running? You could go to the pool and swim.) Ask *What could your friend say to reply?* (Thanks, I like that idea. I'm not sure that would work for me.)
- Tell partners to act out situations in which one student makes a suggestion about a type of exercise and the other student responds to the suggestion. Invite a few partners to act out their role plays for the class.

Present 1

- Say *Another way you can make suggestions is to offer advice. We're going to learn about ways that you can offer advice and accept or decline someone's advice.* Tell students to open their books at page 47. Say *Listen. You'll hear phrases used to offer advice and to accept or decline advice.* Play **Track 034.**
- Ask *What phrases do the speakers use to offer advice? What do they say to accept advice? What do they say to decline advice?* List the phrases on the board.
- Play **Track 034** again and tell students to read along in their books. Then tell students to take turns offering advice and accepting or declining advice. Supply additional prompts such as the following:

> Have you thought about _____?
> Sounds like a good idea.
> Thanks, but I'd rather _____.
>
> It would be a good idea if you _____.
> Thanks for the advice.
> Thanks, but I don't think that will work for me.

- 1 Say *Now listen to two speakers offer advice and respond to advice. Make notes about the words and phrases you hear.* Play **Track 035**. Tell students to share the words and phrases they write.

Practise 2

- 2 After students have become comfortable using the speaking strategy, direct them to Activity 2. Ask students to complete Activity 2 independently.
- Ask students to read their completed dialogues aloud, taking turns as Natalia and Alex. Then ask *Did you hear different ways to offer, accept and decline advice? What words and phrases did you use or hear?*

Apply 3 4

- 3 Put students into groups of three. Tell them to cut out and use the spinner on page 157 to role-play conversations. Model with two students. Spin the wheel and say *The spinner landed on (Trying a new food).* Tell one student to read aloud the advice in the speech bubble. Decline the advice by saying *Actually, I was thinking I could try prawns.* Tell the other student to accept the advice by saying, for example, *Great idea! I think I will try sardines.*
- 4 **Connect** Put students into pairs. Tell them to think about their earlier discussions about food choices and meals they've had. Students can review any notes or journal entries they made.
- Say *Think about how your food choices affect other people and the environment. Talk with your partner about ways to eat more responsibly. Your partner will offer you advice and you respond by accepting or declining the advice.* Once partners have given advice and responded, tell them to swap roles. Invite students to share some of their advice and responses with the class.

Extend

- Put students into pairs. Invite partners to act out a scenario on a TV cookery programme. One student acts as a chef, offering advice on purchasing, preparing and cooking food for a meal. The other student acts as an observer and accepts or declines the advice.
- If time allows, hand out **Worksheet 4.3.3**. Explain that students will use the worksheet to offer advice and to accept or decline advice.

Consolidate

- Say *I'll offer advice and invite two students to accept and decline the advice.* Model an example. Say *I'll say, for example, 'If I were you, I'd go to the farmer's market at the weekend'. Then I'll say '(David), accept the advice'. (David) says, 'That sounds like a good idea'. Then I'll say '(George), decline the advice'. (George) says 'Actually, I was thinking I could go to the community farm at the weekend'.* Offer advice on topics such as: *using fresh ingredients to prepare meals, avoiding using packaged food, reading labels to determine where food comes from* and *eating food from different cultures.*

BE THE EXPERT

Strategy in Depth

There are additional ways to offer advice and accept or decline advice in English. These include:

Offering Advice
Have you considered ...?
Perhaps you could ...
In your position, I would ...
What I would do is ...
My advice would be to ...

Accepting Advice
Good idea!
That's a good idea.

Declining Advice
Thank you. I'll take that into consideration.
I don't think that will work for me.
Thanks, but that won't work for me.

Teaching Tip

Make sure that students understand the instructions before starting an activity. Review instructions, focusing on one step of the instructions at a time. Ask students to point out any step they don't understand.

Formative Assessment

Can students
- offer advice?

  Say *Offer advice to a friend about purchasing or eating seafood.*
- accept or decline advice?

  Say *I'll offer advice and you respond in two different ways to accept and decline the advice.* Then make a statement such as *You should think about volunteering at the community farm to help harvest vegetables.*

Online Workbook Speaking Strategy

GRAMMAR 1

Objectives

Students will

- use mixed conditionals to express how things would be different.
- use mixed conditionals to talk about food awareness and food revolutionaries.
- identify and use words associated with food revolutionaries.

Grammar Use mixed conditionals to express how things would be different

Target Vocabulary *protein, recipe, restore, revolutionary, spice*

Academic Language *mixed conditional*

Content Vocabulary *balance, cacao, chips, cookbook, diet, ingredient, label, necessary, sandwich, toast*

Resources Online Workbook/Workbook pages 26–27; Tracks 36–39 (Audio CD/Website/CPT); CPT: Grammar 1

GRAMMAR 036

Mixed conditionals: Expressing how things would be different

If I **hadn't learnt** about overfishing, **I would** still **be eating** tuna.

If you **had learnt** about Indian food sooner, **you wouldn't** still **be eating** pizza all the time.

1 Read. Circle the correct answer.

1. If I (*had learnt*) / *learnt* how to cook, I (*wouldn't be*) / *wouldn't have been* eating sandwiches all the time.
2. I *wouldn't have been* / (*wouldn't be*) eating chips now, if I (*had remembered*) / *remembered* to pack my lunch.
3. What (*would we call*) / *would we have called* a sandwich today if the Earl of Sandwich *didn't ask* / (*hadn't asked*) for his food to be served between two pieces of toast?

2 Listen. Complete the sentences. 037

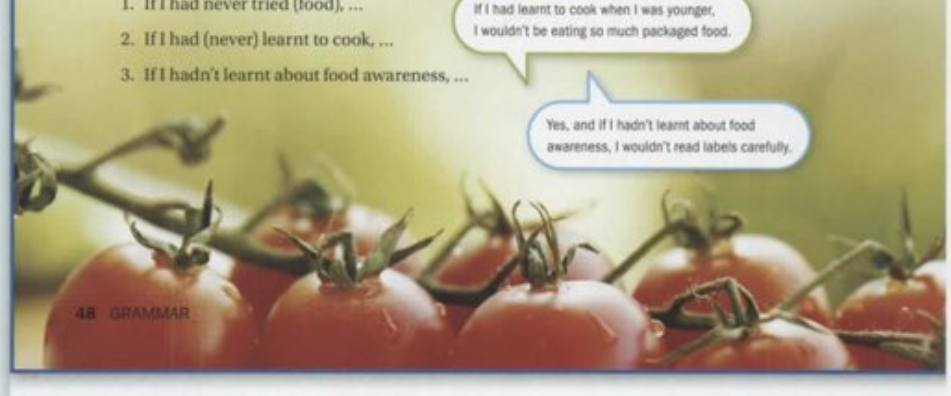
1. If Barton Seaver hadn't grown up in a family where trying different foods was so important, food might not matter to him as much.
2. If food hadn't been so industrialised, we would still be more closely connected to what we eat.
3. If we had stayed more connected to our food, we would appreciate it more.

3 Work in pairs. Talk about what would be different now in these situations.

1. If I had never tried (food), ...
2. If I had (never) learnt to cook, ...
3. If I hadn't learnt about food awareness, ...

If I had learnt to cook when I was younger, I wouldn't be eating so much packaged food.

Yes, and if I hadn't learnt about food awareness, I wouldn't read labels carefully.



48 GRAMMAR

Warm Up

- **Revisit** Say *You've learnt about conditional sentences. They use the word if to talk about things that could happen or might have happened.* Write the following on the board:

> If I were _____, I'd _____.
>
> If I had _____, I would have _____.

- Say *If I were planning a birthday dinner for my friend, I'd use only fresh local foods.* Ask *What would you do if you were planning a birthday dinner for your friend?* Tell students to use the first sentence frame to respond.

- Then say *If I had planned a birthday dinner for my friend, I would have used only fresh local foods.* Ask *What would you have done if you had planned a birthday dinner for your friend?* Tell students to use the second sentence frame to respond.

4 **LEARN NEW WORDS** **Listen and read about food revolutionaries.** Then listen and repeat. 038 039



Barton Seaver

You have already learnt that Barton Seaver is a food **revolutionary**. He wants to change the way we eat, especially seafood. According to Barton, if we hadn't overfished popular fish like tuna and cod, the ocean's ecosystem wouldn't be out of balance. Barton understands that fish is in demand because it's a healthy source of **protein**. He just wants people to try fish that are lower on the food chain. This would help **restore** the population of overfished species. Barton is trying to make changes today, but there were other food revolutionaries long before him.



Christopher Columbus (1451–1506)

Christopher Columbus is known around the world as an explorer. But Columbus is also one of the first food revolutionaries. If he hadn't travelled west in search of **spices** from India, he would never have arrived in the Americas. And if he and other explorers hadn't arrived in the Americas, foods such as tomatoes, potatoes, corn and cacao would not have been brought back to Europe. Without Columbus's exploration, the modern diet of many cultures would be much different.



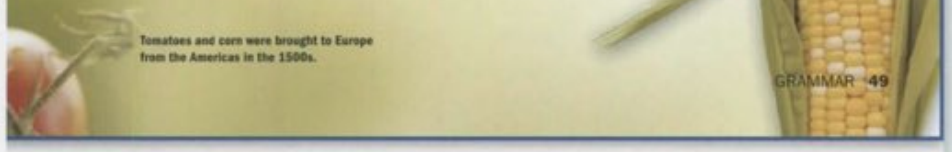
Auguste Escoffier (1846–1935)

Another food revolutionary is French chef Auguste Escoffier. Escoffier wanted to make the process of cooking more standard. He wrote down ingredients and necessary steps for each of his dishes. If Escoffier hadn't done this, we might not have **recipes** or cookbooks!

5 **Work in pairs.** Talk about how things would be if it weren't for food revolutionaries. Used mixed conditionals in your discussion, as well as the words from the box.

corn	fish	potato	recipe	spice	write

6 **Work independently.** Research another food revolutionary, such as Julia Child, Clarence Birdseye or Ettore Bioardi. Write about the person you chose. Say how things would be different if it hadn't been for that person's work. Present your research to the class.



Tomatoes and corn were brought to Europe from the Americas in the 1500s.

Present

- Tell students to open their books at pages 48–49 and look at the grammar box. Ask a student to read aloud the grammar point. Say *We use mixed conditionals to say how something in the present would be different if something else had happened in the past.*
- Play **Track 036** and ask students to follow along in their books.
- Write the following on the board:

Imagined past event	Present event
If I hadn't learnt about overfishing,	I would still be eating tuna.
If you had learnt about Indian food sooner,	you wouldn't still be eating pizza all the time.

- Point to the first and second columns on the board and say *A sentence with mixed conditionals has two parts: an* if *clause and a main clause.*

BE THE EXPERT

Grammar in Depth

Type 2 conditionals contain clauses that express an imagined present or ongoing situation with a result in the present.

If I weren't so hungry, I would meet you at the café later for lunch.

Type 3 conditionals contain clauses that express an imagined situation in the past with a result in the past.

If I hadn't been so hungry, I would have met you at the café later for lunch.

Mixed conditionals contain clauses that refer to different times.

Type 2/Type 3 mixed conditionals express an imagined present or ongoing situation with a result in the past.

If you weren't so picky about food, she would have invited you to the food show.

Type 3/Type 2 mixed conditionals express an imagined situation in the past with a result in the present or future. This is the type presented in the Student's Book.

If I had remembered to ask for the leftovers, I wouldn't be eating this boring sandwich now.



- Next, write the following on the board:

if + past perfect verb	would + present continuous verb
if I had (not) learnt	I would be eating
if you had learnt	you would (not) be eating

- Say *Use the word* if *with the past perfect form of a verb to talk about an imagined or unreal event that happened in the past. Use the word* would *with the present continuous form of a verb to talk about what would be happening now in the present as a result of the imagined or unreal past event.*

Practise 1 2 3

- 1 Tell students to read Activity 1. Say *Look for the clauses that make up the two parts of each sentence in items 1 to 3. Circle the correct form of the verb in each clause. Notice that the word* if *doesn't always appear at the beginning of a sentence or a question.* Tell students to complete the activity on their own.
- After students have finished, invite individuals to read aloud their completed sentences. If students give incorrect responses, review the correct verb tense to use with each clause.
- 2 Say *Now you'll listen to some information about Barton Seaver. Then you'll complete sentences with mixed conditionals to say what you heard.* Tell students to read over items 1–3 before playing the recording.
- Play **Track 037**. Tell students to complete the sentences. You may want to pause and restart the recording at certain points to give students time to write.
- When students have finished, replay **Track 037** and tell them to check their answers. Then invite different students to read their completed sentences aloud.
- 3 Put students into pairs. Say *Read the* if *clause for each situation. Talk with your partner about how something would be different now if the event had or hadn't happened in the past.* Point out that, in item 1, students should substitute a kind of food for the word *food* shown in brackets and in item 2, students can include or omit the adverb *never*, depending on their specific situations.
- Tell two students to read aloud the dialogue in the speech bubbles to model using mixed conditionals. Then tell partners to use mixed conditionals to discuss each situation.

Apply 4 5 6

- 4 LEARN NEW WORDS Tell students to open their books at page 49. Tell them to read the instructions for Activity 4. Say *A revolutionary is someone who wants to change the way things are. You've learnt about how Barton Seaver thinks we should change our relationship to food. Now you're going to learn more about Barton Seaver. You'll also learn about two other food revolutionaries.* Play **Track 038** and tell students to read along with the text.
- Say *You heard some new words. Now listen and repeat each word and sentence.* Play **Track 039** and tell students to repeat.
- 5 Put students into pairs. Say *Talk with your partner about how things would be different if food revolutionaries like Barton Seaver, Christopher Columbus and Auguste Escoffier hadn't made important changes to things related to food. Use mixed conditionals as you talk. Use the words in the box in your discussion, too.* Tell partners to talk about the ways things would be different now without the food revolutionaries' actions. Invite partners to share some of their discussions with the class.

- 6 Tell students to use the Internet or reference materials from the school library to research one of the given food revolutionaries. Say *Find out about the kind of changes made by the food revolutionary you chose. Write a report that describes the changes and explains how things would be different today if the person hadn't made those changes in the past. Use mixed conditionals in your report.* Encourage students to include visuals in their reports. Schedule time for students to present their reports to the class.

Extend

- Tell students to work in groups of three. Say *Imagine that you had done something differently in the past or that something in the past had happened in a different way. Then think about how things would be different now as a result of the imagined past event. Say a sentence using mixed conditionals to talk about it. Each person in your group then says a sentence using the same imagined past event and talks about a different result.*
- Model an example with three students. Ask (Rosa) to say *If I hadn't broken my leg, I would be going to a football camp this summer.* Tell (Peter) to say *If you hadn't broken your leg, you would still be on the football team.* Tell (Amalia) to say *If you hadn't broken your leg, you would be the best player on the team this year.*
- Explain that each student in the group takes a turn saying an original sentence and the other group members say sentences that talk about different results.

Consolidate

- Write phrases such as the following on the board:

> ..., I wouldn't be trying a new recipe today.
>
> ..., I would still be purchasing packaged foods.
>
> ..., I would choose a different main course.
>
> ..., I wouldn't be eating as much protein.

- Say *Each phrase talks about an event in the present. Say a sentence with an imagined past event that would result in the present event. Use if plus a past perfect verb.* Model an example. Say *If I hadn't bought fresh vegetables at the market yesterday, I wouldn't be trying a new recipe today.*
- Invite different students to say sentences using mixed conditionals for each phrase on the board.

BE THE EXPERT

Our World in Context

Auguste Escoffier revolutionised the way modern restaurant kitchens work. Working at London's Savoy Hotel in 1890, Escoffier introduced the idea of 'brigades' with groups of chefs specialising in preparing one part of a meal, such as sauces, soups, fish, starters and pastries. As a result, professional kitchens became more efficient at quickly delivering meals to many diners at the same time. Escoffier also simplified food preparation methods by eliminating complex garnishes and championing the use of fresh, seasonal ingredients. He created sauces and stocks to use as the basis for flavourful and savoury dishes. His cookbooks and recipes are still referenced by professional chefs today.

Teaching Tip

Correcting students is necessary, but it's important to provide feedback in a positive way. The gentlest way to correct students is to restate their response correctly and ask them to repeat it. The goal is to keep students motivated. Always acknowledge what students do well to reinforce learning and build confidence.

Formative Assessment

Can students

- use mixed conditionals to express how things would be different?

  Say *Suppose Christopher Columbus never travelled to the Americas. Say how something would be different today. Say a sentence using mixed conditionals.*
- use mixed conditionals to talk about food awareness and food revolutionaries?

  Ask students to say a sentence using mixed conditionals to say how Barton Seaver changed people's ideas about the way we eat.

Workbook For additional practice, assign Workbook pages 26–27.

Online Workbook Grammar 1

READING

Objectives
Students will
- read about and discuss how indoor farming can help solve the problem of feeding the world's growing population.
- identify and learn new words in the reading.
- connect information in a text to information in other texts and to their own background knowledge.

Reading Strategy Connect text to prior knowledge

Vocabulary Strategy Use context of unit

Target Vocabulary *consistent, organic, sustainable, vertical*

Academic Language *context*

Content Vocabulary *aeroponics, agriculturalist, climate, drought, flavour, graze, hydroponics, mist, nutrient, overused, pesticide, ruin, run off, spray, threaten*

Pronunciation The *ar* sound

Resources Online Workbook/Workbook pages 28–29; Worksheet 4.3.4 (Teacher's Resource CD-ROM/Website); Tracks 040–041, 117–119 (Audio CD/Website/CPT); CPT: Reading

Materials a plant cutting with roots in a jar of water

1 **BEFORE YOU READ** **Discuss in pairs.** Based on what you have learnt so far and the photo on this page, what do you think the reading is about?

2 **LEARN NEW WORDS** **Find these words in the reading.** What do you think they mean? Think about the context of this unit. Then listen and repeat. 040

consistent	organic
sustainable	vertical

3 **WHILE YOU READ** **Think about how what you have learnt so far in this unit relates to the text.** 041



National Geographic Explorer Caleb Harper and his CityFarm

Grow IT HERE, Eat IT HERE

With 80 per cent of the world's population living in cities by the year 2050, we need to consider indoor farming.

What do you think of when you hear the word *farm*? You probably think of a large, open space with lots of different crops growing and animals grazing, don't you? Well, urban agriculturalist Caleb Harper is working to change how we think about farms.

Over the past few years, Caleb has been researching different forms of vertical farming. He has been working to bring farms into the city. His main focus is on two types of vertical farming: *aeroponics* and *hydroponics*. With aeroponics, a nutrient-filled mist is sprayed on a plant's roots to help them grow without soil. With hydroponics, a plant is grown in nutrient-rich water.

Caleb uses simple computer technologies to monitor his crops. This technology allows him to control climate and provide consistent light, food, temperature and water. The result is better plant growth and flavour. This consistency also allows his crops to produce food four to five times faster than those of a traditional outdoor farmer.

Caleb's work is important. At the moment, we are facing a global food crisis. The world's population is at seven billion. In 30 years, it will be nearly nine billion. We will need to produce 70 per cent more food to feed these additional people, but there isn't enough farmland.

Warm Up

- **Build background** Display the plant cutting with its roots in a jar of water. Say *You can take a cutting from some plants and put it in water. It will grow into a new plant.* Point to the roots and say *The roots of a plant carry nutrients, or substances that are needed to grow, to the rest of the plant.* Ask *Where do you put a plant's roots when you are ready to plant it?* (in the ground) Say *Plants get nutrients and water from the soil in the ground.* Point to the roots again. Say *These roots are growing in water now. When the roots are strong enough, the plant is ready to be planted in the ground.*

- Say *You're going to read and learn about new technologies that can be used to grow plants in ways different than they've ever been grown before.*



Even if there were, traditional farming can be harmful to land. Over-used soil loses nutrients. Farmers use chemicals to treat their crops. These chemicals get into the ground and run off into bodies of water. The polluted water supply threatens the ecosystem and the health of those living nearby.

Vertical farming systems can help solve these problems. First, farms in urban areas will allow people to harvest fresh produce year-round. There is no need to worry about threats such as droughts or insects, which could ruin a crop. And indoor farms are sustainable. They use less water than a traditional farm, and with aeroponics, 97 per cent of fresh water is re-used. Vertical farms use less energy because they don't depend on large farming equipment and long transportation systems to carry the food from farm to city. And all of the crops in an indoor farm are grown without pesticides, so they are fresh, healthy and organic.

So, the next time you hear the word *farm*, don't just think of that large, open space with crops and animals. Think inside the city – it's the future of farming.

4 AFTER YOU READ **Work in pairs to answer the questions.**

1. Describe Caleb Harper's indoor farm.
2. Why is Caleb's work important?
3. What are *aeroponics* and *hydroponics*?
4. What are two problems with traditional farming?
5. What are three ways that indoor farms are sustainable?

5 **Work in groups.** Using what you have learnt in the unit, discuss whether you think Barton Seaver would support Caleb's work. Give examples to support your ideas.

6 **Discuss in groups.**

1. Vertical farms will help provide food for our growing population. What is another way we can produce more food?
2. Apart from the health and environmental benefits, what other benefits could indoor farming bring to a city?

Before You Read 1 2

- 1 Tell students to open their books at pages 50–51. Put students into pairs and tell them to read Activity 1. Say *Look at the photo on these pages and think about what you've already learnt in this unit. Make a prediction about what you think the reading will be about.* When students are ready, review their predictions as a class.
- 2 **LEARN NEW WORDS** Say *Now you're going to learn some new words in the reading. Look at the four words in the box. Find each of them in the reading.* Give students time to locate the word *vertical* in the second paragraph, *consistent* in the third paragraph and *sustainable* and *organic* in the second-to-last paragraph.
- Say *To help work out the meaning of the words, you can think about what you've been learning in this unit.* Ask *What are some things that you've learnt about so far?* (why it's important to make good food choices, how industrial farming and commercial fishing can harm the environment, fresh food and packaged food, food revolutionaries who changed the way we relate to food)

BE THE EXPERT

Reading Strategy

Connect text to prior knowledge
Students' comprehension is improved when they make connections to what they have learnt from other texts and to what they already know about a topic. Encourage students to make connections between important ideas in one text as well as between and among ideas across texts. As students connect ideas to what they already know, they integrate these new ideas with existing background knowledge. To help students make connections, they can ask themselves: *Have I read other texts about this topic? What does this remind me of in another text that I've read? How is what I'm reading similar to or different from other things I've read about this topic? What do I already know about this topic?*

Vocabulary Strategy

When learning new words, remind students to consider the context of the entire unit. Tell students to ask themselves: *What is the unit theme? What topics or categories are we looking at in this unit? What have we learnt so far? How do these words relate to this context?* Situating new vocabulary into the context of the unit will help students more quickly learn these words and identify their relevance in understanding the unit as a whole.

About the Photo

The photo shows Caleb Harper's CityFarm at the Massachusetts Institute of Technology (MIT) in Cambridge, MA, USA.

Pronunciation

Go to Student's Book page 145. Use Audio Tracks 117–119.

The *ar* sound As described, the pronunciation of the letter *a* changes to a long *ar* sound when it occurs between two consonants. The IPA symbol is /ɑ:/. In British English, this sound is common in words such as bath (/bɑ:θ/), castle (/ˈkɑ:s(ə)l/) and craft (/krɑ:ft/), but in North American English, this sound is less common. The word bath, for example, is pronounced /bæθ/.



- Now point to the word *vertical* in the second paragraph. Say *Here's vertical.* Ask a student to read aloud the sentence with the word *vertical*. Say *You can look at the photo, too, to help work out the meaning of vertical.* Ask *What do you think* vertical farming *is?* (growing plants above the ground in rows one above another) Ask *Then what do you think* vertical *means?* (going up and down or going from top to bottom)

- Next, point to the word *consistent* in the third paragraph. Ask another student to read the sentence aloud. Say *Think again about what the unit is about.* Ask *What do you think the person is providing consistent light, food, temperature and water for?* (to grow vegetables or fruit) Ask *What do you think* consistent *means?* (regular, in the same way)

- Tell students to read the second-to-last paragraph to work out the meanings of *sustainable* and *organic*. Remind them to think about the meaning of the words in the context of what they're learning in the whole unit.

- Then ask students to listen to **Track 040** and repeat.

While You Read 3

- 3 Say *Now we're going to learn about indoor farming technologies and why they're important for our future.* Play **Track 041** and tell students to read along.

- Say *Now listen and read again. As you read this time, think about what you've already read about industrial farming, the globalisation of food and the impact on the environment. Also keep in mind what you already know about farming and the ways that people all around the world get food. Connecting ideas in what you've already read and what you already know to what you are reading now will help you better understand what you read.* Play **Track 041** again or allow students to read silently on their own.

After You Read 4 5 6

- 4 Tell students to turn to page 51. Put students into pairs. Tell partners to read the questions and answer them. If students disagree on an answer, tell them to go through the text again to find support for their answers. After students answer the questions, you may want to share with them the information in the Teaching Tip about the origins of the words *aeroponics* and *hydroponics*.

- 5 Put students into groups of three or four. Say *Think about all you've learnt about food in this unit.* Ask *What ideas does Barton Seaver have about food?* (wants people to make better choices about food and eat local foods, wants to restore the ocean's ecosystem by lessening the harm done by commercial fishing) Say *Talk with your group about how you think Barton Seaver would feel about indoor vertical farming. Support your point of view with specific examples of things that Barton Seaver has done and that Caleb Harper has done.*

- When groups have finished their discussions, invite them to share their ideas with the class.

- 6 Tell students to form groups of three or four to answer the activity questions. One student in each group can act as note-taker and track information from the discussion.

- When discussions have finished, say *Now let's see what you've discussed.* Draw the following table on the board. Include a row for each group.

Group	Ways to produce more food	Benefits of indoor farming to a city
A	engineer plants that produce more crops in a shorter amount of time	re-purpose buildings to become urban farms
B	restore nutrients to existing farmland to increase production	more jobs in the city
C		

- Ask the note-takers from each group to report the information from their discussions. As they do, fill in the table for each group. Make observations and ask questions about the information in the table. For example, say *Group A has an idea to engineer plants so they grow a greater number of crops in a shorter amount of time.* Ask *What type of skills would a person need to do that?* (Sample response: knowledge of science and biology, lab and computer skills)

Extend

- Tell students to work in groups to create an informational flyer to raise awareness about the problem of the global food crisis and the solution offered by indoor farming. Students can use data and other information from *Grow It Here, Eat It Here* in their flyers. Encourage students to include diagrams, tables and drawings in their flyers.
- If time allows, you may want to hand out **Worksheet 4.3.4** in class. Hand out a copy to each student. Say *Look carefully at the new words on page 50. You will use your new words to answer questions. Then you will create new words on your own by using what you know about words and word parts.* Tell students to complete the worksheet individually.

Consolidate

- Say *Imagine you are giving a tour of an indoor farm to a visitor. Describe one interesting fact about indoor farming.* Invite students to provide one piece of information they learnt about indoor farming.

BE THE EXPERT

Teaching Tip

The words *aeroponic* and *hydroponic* both have their origins in Greek words. The word part *aero-* comes from the Greek word *aero* which means 'air'. The word part *-ponic* comes from the Greek word *ponos* which means 'to work'. Similarly, the word part *hydro-* comes from the Greek word *hydro* which means 'water'.

Answer Key

Comprehension 4

1. It grows plants vertically, without soil, in both air and water. Computers monitor the growing conditions of the crops.
2. Seventy per cent more food will be needed to feed the growing population of people around the world.
3. *Aeroponics* is growing plants in the air, without soil. *Hydroponics* is growing plants in water, without soil.
4. There isn't enough farmland. Chemicals used in farming can pollute the water supply.
5. Fresh produce can be harvested year-round. They use less water and energy. They grow organic crops.

Formative Assessment

Can students

- discuss how indoor farming can help solve the problem of feeding the world's growing population?

  Ask *How does the growing time for crops produced by Caleb Harper's vertical indoor farm compare to the growing time for crops produced by a traditional outdoor farm?*
- use new words to discuss what they've read about indoor farming?

  Ask students to use *consistent, organic, sustainable* or *vertical* in a sentence that talks about indoor farming.
- connect information in the reading to information in other texts and to their own background knowledge?

  Ask *What would Barton Seaver say about Caleb Harper's vertical farming technique?*

Workbook For additional practice, assign Workbook pages 28–29.

Online Workbook Reading

VIDEO

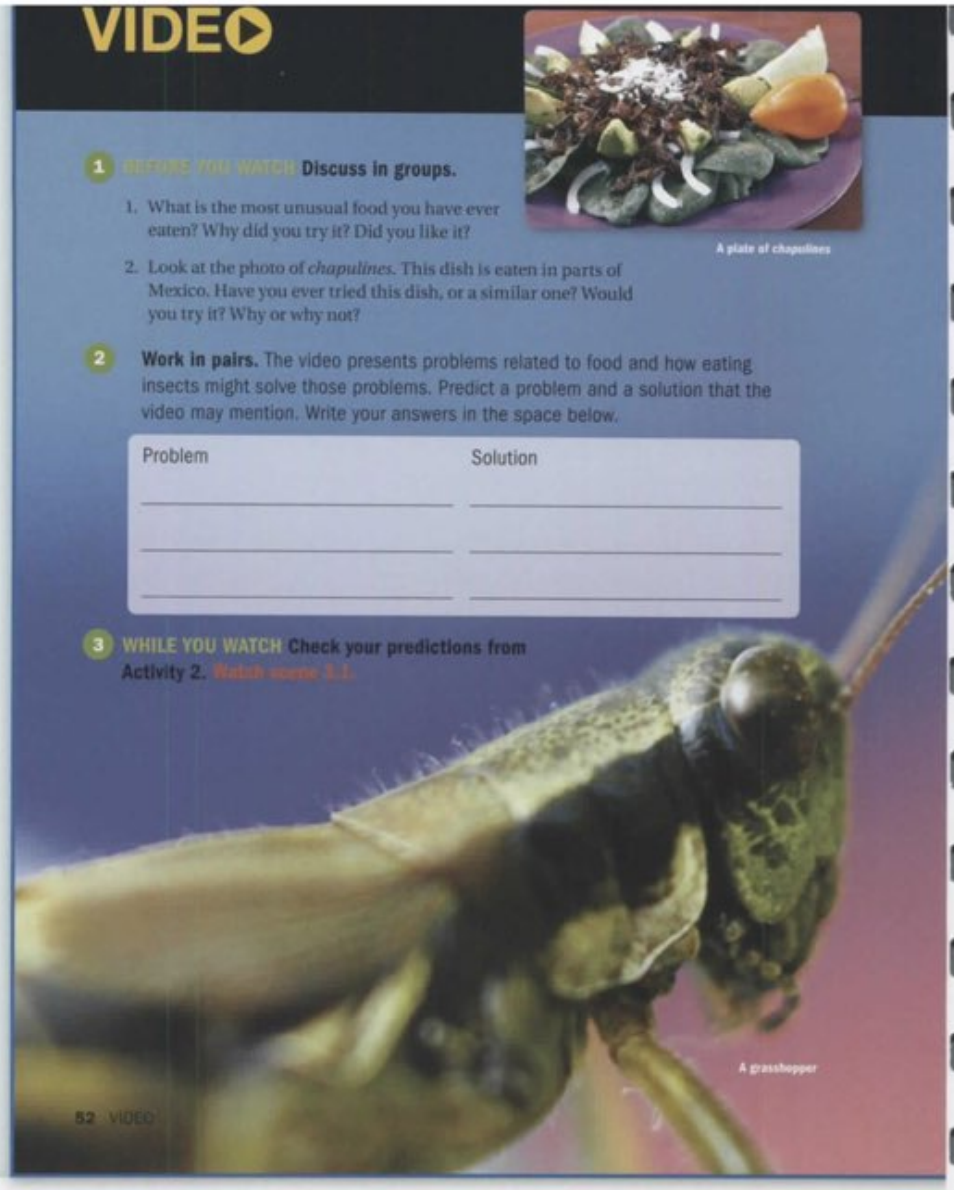
Objectives
Students will
- discuss eating unusual foods and how it can help solve global food problems.
- apply the message of the video to their personal lives.

Academic Language *convince, mention, prediction, problem, solution, survey*

Content Vocabulary *beetle, caterpillar, chapulines, dish, presently, snail, snake, unpleasant, worm*

Resources Video scene 3.1 (DVD/Website/CPT); Online Workbook; CPT: Video; Graphic Organiser: Note-taking table (Teacher's Resource CD-ROM/Website) *(optional)*

Materials audio recording device *(optional)*



Before You Watch 1 2

- Tell students to brainstorm what they know about eating unusual types of foods, such as insects. Say *List one or two things you know about unusual foods, such as insects. Think of any questions you may have about eating insects as food.*
- 1 Put students into groups of three or four. Tell them to open their books at pages 52–53. Ask a student to read items 1 and 2 aloud. Say *Ask and answer the questions with your group members.* When groups have finished the activity, and if time allows, invite students to share their answers with the class.
- 2 Say *You're going to watch a video called* Should We Eat More Bugs? Ask *Who remembers what* edible *means?* (safe to eat) Ask a student to read aloud Activity 2.
- Put students into pairs. Say *Think about what you've learnt about the global food crisis and the growing world population. Use what you know to make a prediction about a problem and a solution that the video might be about.* After partners have made their predictions, invite several students to share their predictions with the class.

While You Watch 3

- 3 Say *Now you're going to watch the video. While you watch, take notes to help you remember some of the facts you'll see and hear.*
- Hand out copies of the Note-taking table graphic organiser or tell students to take notes in their notebooks. Say *You can use your notes to help you answer the questions in the next activity.*
Play **Video scene 3.1**.

4 AFTER YOU WATCH Read the sentences below. Use the information from the video to decide if each one is *true* or *false*.

1. Presently, very few people in the world eat insects. T F
2. Beetles and caterpillars are the insects most commonly eaten by people. T F
3. There are fewer than 200 species of edible insects. T F
4. Insects are a good solution to the increased demand for protein. T F
5. Insects are already being used to produce food for farm animals. T F
6. Eating insects is really harmful for the environment. T F

5 Work in pairs. This video suggests that we try something new, even if it seems unpleasant. Think about a time when you had to try a new dish, even though you didn't want to. Who or what made you try it? Was it what you expected? Explain.



Eating a centipede

6 YOU DECIDE Choose an activity.

1. **Work independently.** Find out about another unusual food source that people may not want to eat, such as snake meat or snails. Learn about where this food is eaten, who eats it and how it is prepared. Write a paragraph to summarise what you learnt.
2. **Work in pairs.** Make a list of six things that people would consider unpleasant to eat, such as insects, worms or certain animal parts. Survey ten people to find out which of these things they are most likely to try, and which they wouldn't try. Present your survey results to the class.
3. **Work in groups.** Prepare a radio advert to convince listeners to try eating insects. In your advert, explain at least three benefits of eating insects.

BE THE EXPERT

About the Photo

The photo at the top of page 52 shows *chapulines* or cooked grasshoppers, which are eaten in many areas of Mexico. The photo on page 53 shows an entertainer on a TV show in Thailand demonstrating the proper way to eat a centipede.

Teaching Tip

Pause the video on an image near the beginning of the video. Tell students to study the image, take notes and then write a prediction about what the entire video might be about. After watching the video, ask students to say whether their predictions were accurate.

Formative Assessment

Can students

- discuss eating unusual foods and how it can help solve global food problems as a result of watching the video?

Say *As a result of the world's growing population, the demand for meat is rising.* Ask *Why is eating insects a good alternative to eating traditional foods, such as meat?*

Online Workbook Video

- If students have difficulty following the video or understanding the text, tables or graphics, pause the video and allow them to ask questions or review the text and graphics.

After You Watch 4 5 6

- 4 Tell students to use their notes to answer items 1–6. Review answers as a class.
- 5 Read aloud Activity 5. Put students into pairs. Say *Think about a time you tried eating a new food. Describe your feelings before you tried the new food and your reaction after you tried the new food. Were you pleasantly surprised? disappointed? disgusted? Talk to your partner about your experience. Then listen to your partner talk about his or her experience.* Invite students to share some of their experiences with the class.
- 6 YOU DECIDE Ask students to choose a project. If students choose to research another unusual food source, guide them in their Internet research or tell them to use available resources in the school library.
- If partners choose to conduct a survey, tell them to research survey formats before they begin. Tell them to choose a format and prepare questions. Tell students to consider using a ranking format for responses to their questions. (1 = least likely to try, 5 = most likely to try) Encourage students to present their survey results in a table or graph.
- If groups choose to make a radio advert, remind them of some elements to use in persuading others, such as stating a position clearly, giving facts and statistics and including supporting details and examples. Remind students to include at least three benefits of eating insects. Tell groups to make an audio recording of their adverts.

GRAMMAR 2

Objective
Students will
- use double comparatives to describe outcomes.

Grammar Use double comparatives to describe outcomes

Academic Language *comment, comparative, outcome*

Resources Online Workbook/Workbook pages 30–31; Worksheet 4.3.5 (Teacher's Resource CD-ROM/ Website); Track 042 (Audio CD/ Website/CPT); CPT: Grammar 2

GRAMMAR 042

Double comparatives: Describing outcomes

The more people there are in the world, **the more** food we need to produce.
The less our food travels, **the less** it impacts the environment.
The more we choose wholesome foods, **the healthier** we are.
The less we eat processed foods, **the better**.

1 Complete the sentences with comparative phrases.

1. The more new foods we try, _____.
2. The less time we spend cooking, _____.
3. The more we know about food, _____.
4. The less we waste food, _____.
5. The more indoor farms there are, _____.
6. The higher the population, _____.
7. The less we use chemicals, _____.
8. The more seafood we demand, _____.

2 Work in pairs. Discuss two ways that food choices impact the environment. Use comparative sentences in your discussion.

The more we ship food across the world, the more we impact the environment.

That's right! And the more we buy from local farms, the less we impact the environment.

3 Work in groups. Take a card. Use a comparative sentence to comment on the topic. Then discuss the comment. Each group member should agree or disagree with the comment.

share with others

Go to page 159.



Warm Up

- **Recycle** Say *What are some adjectives that describe your favourite foods?* (good, tasty, delicious) List students' responses on the board. Say *If you wanted to compare one food to another, you'd use comparative adjectives.* Ask *What's the comparative form of each adjective on the board?* (better, tastier, more delicious) Write each comparative form on the board.
- Ask students to talk with a partner to compare foods that they like. Tell them to use all the comparative adjectives on the board.

Present

- Tell students to open their books at page 54. Ask a student to read the grammar point aloud. Say *An outcome is a result. We use double comparatives to say how an increase or decrease in one thing results in an increase or decrease in another thing.*
- Play **Track 042** and tell students to read along silently. Then write on the board: *the + comparative + noun/pronoun + verb.* Say *A sentence with a double comparative has two phrases. Both phrases use this same structure.*
- Read aloud the last sentence in the grammar box. Say *Sometimes you can leave out the noun or pronoun and the verb. The meaning is 'The less we eat processed foods, the better (we are)'.*
- Write the following sentence frames on the board:

The more _____, the more _____.
The less _____, the less _____.
The more _____, the healthier _____.
The less _____, the better.

- Tell students to practise using the sentence frames to say original sentences with double comparatives. (The more we eat local foods, the more we help the environment.)

Practise 1

- 1 Tell students to complete Activity 1 on their own. Say *Think about what you've learnt about food production, making good food choices and food awareness. Write a comparative phrase to complete each sentence.* When students have finished, ask them to share their sentences with the class.

Apply 2 3

- 2 Put students into pairs and tell them to read the instructions for Activity 2. Ask two students to read the dialogue in the speech bubbles to model using double comparatives. When they have finished, invite partners to share their sentences with the class.
- 3 Put students into groups of three or four. Tell students to cut out the game cards on page 159. Say *Put the cards face-down in a pile. Take turns choosing a card and making a comment about the topic. Use a double comparative in your comment. Other group members then use double comparatives to agree or disagree with you.* Model an example with a student. Say *The more we share with others, the happier we are.* Prompt the student to say *I agree. The more we share with others, the better we feel about ourselves.*

Extend

- If time allows, write the following on the board:

the closer / the better	the further / the more
the higher / the faster	the lower / the better
the greater / the less	the sooner / the faster
the spicier / the more flavourful	the smaller/ the easier

- Put students into pairs. Say *Write sentences with your partner using the double comparatives on the board.* Model an example for students. Say *The closer we live to organic farms, the better food we can buy.*
- To conclude, hand out **Worksheet 4.3.5**.

Consolidate

- Say *I'll say a comparative phrase. Then I'll ask a student to say another comparative phrase to describe a result or outcome.* Model an example. Say *I say 'The more fruit and vegetables you buy, …' Then I call on (Trina) and (Trina) says 'the more wholesome food you eat'.* Invite students to reply to comparative phrases you provide with comparative phrases describing results.

BE THE EXPERT

Grammar in Depth

The first phrase in a double comparative expresses a condition. The second phrase expresses an outcome or result of the condition. Double comparatives are often used to point out the importance of doing or not doing a certain activity. Here is an example:

> *The more we eat sugar, the more we want sugar.*

The meaning of the double comparative is 'If you eat a lot of sugar, you'll want more sugar'.

The following two examples illustrate when to use *less* and *fewer*.

> *Don't eat a lot of sugar. The less you eat, the better.*
> *Don't drink a lot of sugary drinks. The fewer you drink, the better.*

Use *less* with uncountable nouns like *sugar*. Use *fewer* with countable nouns like *drinks*.

Teaching Tip

To give students additional practice with new grammar structures, tell them to create new items or questions similar to the ones they complete in an activity. After students come up with new items or questions, tell them to exchange with a partner and complete.

Formative Assessment

Can students

- use double comparatives to describe outcomes?

Give students the following situation and ask them to use double comparatives to describe the situation: *Some people enjoy eating spicy food.*

Workbook For additional practice, assign Workbook pages 30–31.

Online Workbook Grammar 2

WRITING

Objectives

Students will

- identify and use elements of a review.
- use facts and opinions to describe a place or thing in a review.
- support facts and opinions with words that show their attitudes.
- analyse a model of a review.
- write a review of their favourite restaurant.

Writing A review

Academic Language *opinion, review*

Content Vocabulary *service, surroundings*

Resources Online Workbook/Workbook page 32; Process Writing Worksheets 1–5, Review Genre Writing Worksheet (Teacher's Resource CD-ROM/ Website); CPT: Writing



WRITING

When you write a review, you combine facts and opinions to describe a place (such as a hotel or a restaurant) or a thing (such as a book, a song or a film). Use the following words to show your attitude when writing a review:

actually **clearly** **honestly** **more/most importantly** **(un)fortunately**

1 **Read the model.** Work in pairs to identify the facts and the author's opinions about the restaurant. What words does the writer use when showing his/her attitude about the restaurant? Underline the words.

If you are looking for a great meal, you should really go to Jozsa's Restaurant. The more I eat there, the better it gets. I'm not the only one who thinks that Jozsa's has the best food in town: the restaurant has actually won many awards for its excellent dishes, such as roasted chicken with potatoes, and beef with noodles. The fish main courses are all delicious as well. Everything at this restaurant is worth a try. And don't forget to save room for dessert. Honestly, the chocolate cake is the best you'll ever have!

Clearly, the chef at this restaurant uses fresh ingredients. There is a large garden behind the restaurant where they grow vegetables and herbs that are used in the dishes. Nothing on the menu is made with packaged foods. For this reason, I feel like Jozsa's is a great choice for a wholesome meal if you can't cook at home.

Fortunately, Jozsa's is open every night from 5.00 to 11.00, and for lunch at the weekends. The restaurant is very busy, so you will want to make a reservation. The service is fantastic every time! The workers are friendly, and more importantly, they always have the food on your table quickly. The inside and outside of the restaurant are both great places to eat. If it's cold outside, try to get a seat next to the fireplace. In nice weather, you can enjoy your dinner in the garden.

Every time my family has something to celebrate, we choose Jozsa's. If you haven't tried Jozsa's yet, you don't know what you're missing!

2 **Work in pairs.** Does this review convince you to try this restaurant? Why or why not?

3 **Write.** Write a review about your favourite restaurant. Give both facts and opinions of the food, the service and the surroundings.

WRITING 55

Warm Up

- **Activate prior knowledge** Write the following sentences on the board: *Fiesta Café serves breakfast from 6.00 a.m. to 11.00 a.m. and lunch from 11.00 a.m. to 3 p.m. The veggie burger at Fiesta Café is quite tasty and probably the best of its kind in town.*
- Ask *Which sentence states an opinion?* (the second sentence) *Which sentence states a fact?* (the first sentence) Ask *How can you tell a fact from an opinion?* (A fact is something that can be proved. An opinion is what someone thinks or believes about something.)
- Say *Write one fact and one opinion about a restaurant where you've eaten.* Give students time to write their facts and opinions. Then invite students to share their facts and opinions with the class. Ask questions such as *How can you prove this fact to be true? What judgment are you making in this opinion?*

Present

- Say *When we write a review of a place, such as a hotel or restaurant or a thing, such as a book or film, we include facts and opinions. Let's look at some words and phrases that we can use to support facts and opinions in a review. These words and phrases help us show what our attitude is towards the place or thing that we are reviewing.*
- Write the following on the board:

actually	clearly	honestly
more/most	importantly	(un)fortunately

- Say *As an example, let's use some of these words and phrases in our sentences about Fiesta Café.*

- Write the following sentence on the board: *Most importantly, Fiesta Café serves breakfast from 6.00 a.m. to 11.00 a.m. and lunch from 11.00 a.m. to 3 p.m.* Ask a student to read aloud the sentence. Then ask another student to substitute *Actually* for *Most importantly* and read the sentence aloud. Say *The phrase* Most importantly *and the word* Actually *support the stated fact about the hours that the café is open. They show that we think this is an important fact about the café.*

- Then write the following sentence on the board: *Honestly, the veggie burger at Fiesta Café is quite tasty and probably the best of its kind in town.* Ask a student to read aloud the sentence. Then ask another student to substitute *Clearly* for *Honestly* and read the sentence aloud. Say *The words* Honestly *and* Clearly *support the opinion of the veggie burger at Fiesta Café. They show our attitude towards the veggie burger – that we think this is an especially good food item at the café.*

- Tell students to open their books at page 55. Review the words in the box with the class.

Read the Model 1 2

- Say *Now we're going to look at an example of a review. First let's look at the photo. What do you think the review might be about?*

- 1 Read the instructions aloud. Put students into pairs. Say *Work with a partner. First identify the facts and opinions in the review of the restaurant. Then look for words and phrases that the writer uses to show his or her attitude towards the restaurant. Look at the words and phrases in the writing box if you need a reminder.* Tell partners to underline words and phrases that the writer uses to show his or her attitude. (*actually, Honestly, Clearly, Fortunately, more importantly*)

- 2 Tell students to work with the same partners. Tell them to read the review again and decide whether it convinces them to try the restaurant. Say *Look for specific things in the review that might convince you to visit or not visit the restaurant.*

- Invite partners to share the results of their discussions with the class. Encourage them to give specific examples from the review that convinced them to try or not try the restaurant.

- **Worksheet** If your students need a reminder of the elements of the Review Writing genre, you may want to hand out the **Review Genre Writing Worksheet** and go over it together.

Plan 3

- 3 Read Activity 3 aloud. Say *Now you're going to plan your writing. You already know your topic – writing a review of your favourite restaurant. So your next pre-writing step is to focus your topic. You'll need to choose your favourite restaurant. Think about restaurants where you've eaten and decide which one you like best.*

BE THE EXPERT

Writing Support

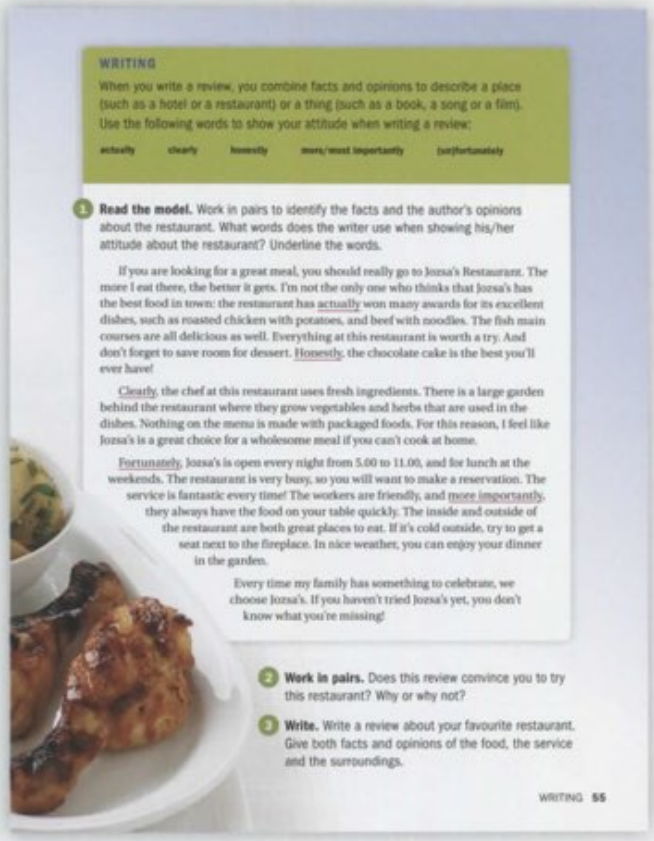
Usage An important feature of a restaurant review is an engaging opening sentence that draws the reader in. Other features often found in a restaurant review include the following: location, phone number, website and opening hours; reservation policy; price range of menu; description of the ambience (formal, casual); the attitude of the service staff (friendly, standoffish); kinds of food available; descriptive language about food; and the use of sensory images (smell, taste, see, feel, hear).

Teaching Tip

If a student is having difficulty with an assignment, avoid rushing in too quickly to help. It's natural for a student to struggle with learning something new. They will feel more of a sense of accomplishment when they do something difficult on their own. Give students enough time to work through the activity on their own, even if they find it difficult. If they are still struggling, then offer help.

Workbook For scaffolded Writing support, assign Workbook page 32.

Online Workbook Writing



WRITING

When you write a review, you combine facts and opinions to describe a place (such as a hotel or a restaurant) or a thing (such as a book, a song or a film). Use the following words to show your attitude when writing a review:

actually clearly honestly more/most importantly (un)fortunately

1 **Read the model.** Work in pairs to identify the facts and the author's opinions about the restaurant. What words does the writer use when showing his/her attitude about the restaurant? Underline the words.

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Every time my family has something to celebrate, we choose Jozsa's. If you haven't tried Jozsa's yet, you don't know what you're missing!

2 **Work in pairs.** Does this review convince you to try this restaurant? Why or why not?

3 **Write.** Write a review about your favourite restaurant. Give both facts and opinions of the food, the service and the surroundings.

WRITING 55

- Students can use the Internet to research information such as opening hours and menu items to help them find accurate facts about their favourite restaurants. Students can then use Activity 1 on Workbook page 32 to organise their facts and opinions about the food, service and surroundings of the restaurant.
- If you have time in class, allow students to work on this step. If not, assign it as homework. If students have workbooks, remind them to use Workbook page 32 for the writing support.

- **Worksheets** If your students need a reminder of any of the steps of process writing, you may want to hand out **Process Writing Worksheets 1–5** and review together.
- **Workbook** Refer students to Workbook page 32 to help them organise and plan their writing.

Write

- After students have finished their pre-writing, tell them to work on their first drafts. If you haven't got enough time in class, assign the first draft as homework.

Revise

- After students have finished their first drafts, tell them to review their writing and think about their ideas and organisation. Tell each student to consider the following: *Is the name of the restaurant stated? Do I include both facts and opinions about the restaurant? Do I use words and phrases that show my attitude towards the restaurant's food, service and surroundings? What seems good in the review? What needs more work?*

Edit and Proofread

- Remind students to consider elements of style, such as a convincing opening sentence, a variety of sentence structures, parallelism and word choice. Then remind them to proofread for mistakes in grammar, punctuation, capitalisation and spelling.

Publish

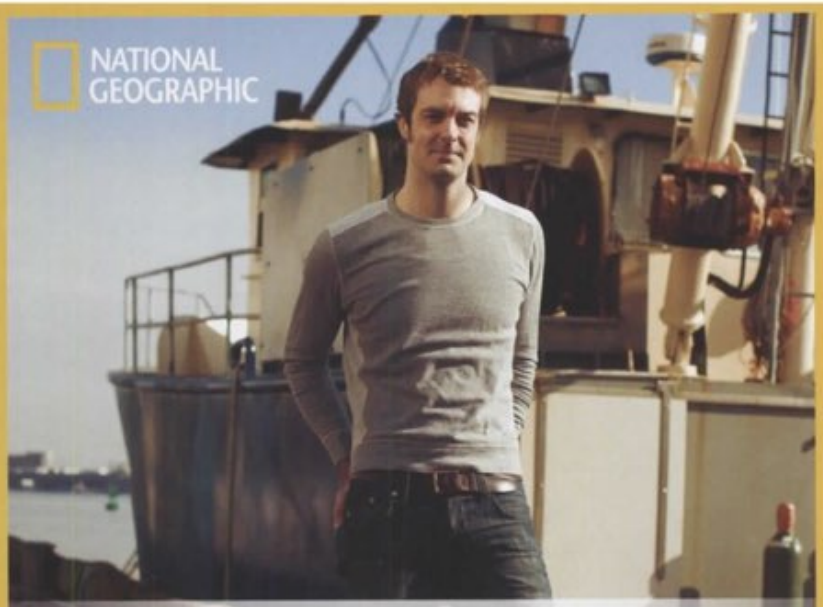
- Publishing includes handing in pieces of writing to the teacher, sharing work with classmates, adding pieces to a class book, displaying pieces on a classroom wall or in a hallway and posting on the Internet.

Writing Assessment

Use these guidelines to assess students' writing. You can add other aspects of their writing you'd like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

	1	2	3	4
Writing Student uses a convincing opening sentence and includes both facts and opinions about the restaurant.				
Grammar Student uses double comparatives to describe results.				
Vocabulary Student uses a variety of word choices, including words learnt in this unit.				



Know Your Food

'Take some time to educate yourself about the right decisions – and make a difference in the health of the planet.'

Barton Seaver

National Geographic Explorer, Chef/Conservationist

1. **Watch scene 3.2.**
2. How much do you know about the food that you eat each day? Why is it important to be informed about food choices?
3. What steps can you take to learn more about the food you eat? Name at least two things you can do to be better informed.

MISSION

Objectives

Students will

- discuss the importance and impact of their own food choices.
- identify ways to improve their knowledge about the food they eat.

Content Vocabulary *educate*

Resources Video scene: 3.2 (DVD/Website /CPT); Worksheet 4.3.6 (Teacher's Resource CD-ROM/Website); Online Workbook: Meet the Explorer; CPT: Mission

BE THE EXPERT

Teaching Tip

Whenever possible, incorporate activities involving movement during class. Breaking up periods of seated work with physical activity will refresh and energise students. It can also help students better remember what they learn.

Online Workbook Meet the Explorer

Mission

- Ask a student to read aloud the quote by Barton Seaver. Say *When we make a difference, we do something that has an important effect on someone or something. We get a different result when we make a difference.* Ask *What do you think Barton means by 'make a difference in the health of the planet'?* (do something that is good for ecosystems and the environment)
- **Activity 1** Say *Now let's watch a video about Barton Seaver.* Play **Video scene 3.2**. Ask them to focus on Barton Seaver's passion for eating responsibly.
- **Activity 2** Put students into pairs. Tell partners to consider and discuss what they know about the food they eat. Encourage them to think about where the food comes from, whether it is processed, how it is packaged and how nutritious it is. Then tell them to discuss reasons to make informed choices about the food they eat. If needed, instruct students to review the information on pages 44–46 about food globalisation and food awareness. Tell students to use mixed conditionals in their discussion. Model an example. Say *If I had known about the impact of overfishing, I'd have stopped eating tuna earlier.*
- **Activity 3** Tell students to consider on their own how they can improve their knowledge about the food they eat. Tell students to use double comparatives in their responses. Model an example. Say *The more I read the labels on packaged foods, the more I'll know exactly what I'm eating.*
- **Worksheet** Hand out **Worksheet 4.3.6.** Explain that students will use the worksheet to further discuss making responsible food choices.

PROJECT

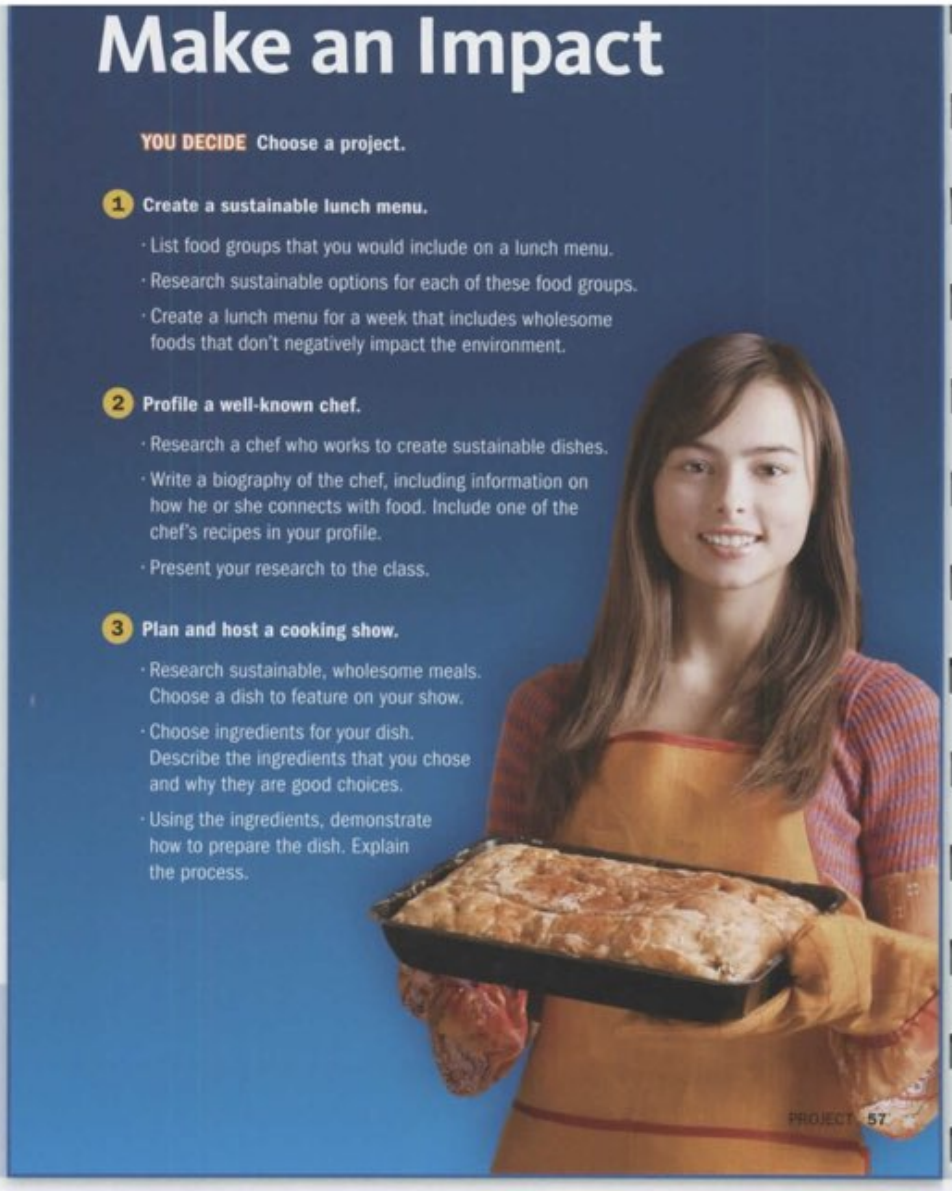
Objective
Students will
- choose and complete a project related to food.

Academic Language *biography, option*

Content Vocabulary *menu*

Resources Assessment: Unit 3 Quiz; Workbook pages 33 and 92; Worksheet 4.3.7 (Teacher's Resource CD-ROM/Website); CPT: Make an Impact and Review Games

Materials video recording device *(optional)*



Assessment Go to page 256.

Unit Review Assign Worksheet 4.3.7.

Workbook Assign pages 33 and 92.

Online Workbook Now I can

Prepare

- YOU DECIDE Ask students to choose a project.
- **Activity 1** Tell students to do Internet research to determine the types of food in each food group and to identify specific foods that come from sustainable sources. Students can look at sample weekly lunch menus from institutions, such as schools or hospitals, to get an idea of formats to use for a weekly menu.
- **Activity 2** Tell students to review the elements of a biography: date and place of birth, information about family and early childhood, achievements, major events in the person's life and why the person is important. Remind students to also include the way their chosen chef connects with food. Tell students to consider including a photo of the chef or a quote from the chef along with the recipe.
- **Activity 3** Students can host their cooking shows using real food. For ease of preparation, consider telling them to feature dishes that use only fruit and vegetables in their demonstrations. Another alternative is to tell students to use photos or play food and act out their demonstrations.

Share

- Schedule time for groups to present their final projects to the class. In the case of the cooking show, determine a suitable location for students to present their demonstrations.
- **Modify** For Activity 3, help students make their cooking shows more realistic. Students can create and perform their shows outside lesson time, record them and then show the recordings to the class.

STUDENT'S BOOK AUDIO SCRIPT

Track 030 1 **Listen and read.** See Student's Book pages 44–45.

Track 031 2 LEARN NEW WORDS **commercial** / Commercial farmers raise crops and then sell them to shops. **conservationist** / A conservationist works to protect plant and animal species. **convenient** / Busy people often look for convenient meals that can be prepared quickly. **diverse** / In a diverse community, you can try foods from many cultures. **globalisation** / Globalisation helps people to exchange ideas and products across cultures. **harvest** / We harvest the vegetables from the garden as soon as they're ready. **impact** / Every choice you make about food impacts the world around you. **local** / Food from local farms can be fresh and delicious. **packaged** / Biscuits and crisps are popular packaged foods. **reflection** / How we dress and what we eat are a reflection of our culture. **taste** / People's taste in foods has changed as new foods become available. **wholesome** / Wholesome foods, such as fruits and vegetables, give our bodies what they need.

Track 032 5 Over time, the way food gets to our plate has evolved and so have our attitudes about what we eat. In the past, people worked very hard to grow and prepare meals. But they were grateful for the food that they had. Now, much of what we eat is produced on an industrial level. Large farms grow only one type of crop. Some of these farms ship this crop all over the world. Others sell their crops to even larger companies, who use them to create packaged foods. When we buy and prepare these foods, we don't feel the strong connection with our main course like our ancestors did. We may not be growing our own food, but we shouldn't ignore where our food comes from and what impact it has on people and the environment.

Track 033 5 LEARN NEW WORDS **attitude** / I changed my attitude about food after learning more about where it comes from. **main course** / The main part of a meal is the main course, after the starter and before the dessert. **grateful** / My friends were grateful for the meal I prepared for them.

Track 034 SPEAKING STRATEGY See Student's Book page 47.

Track 035 1 **S1**: What's wrong, Marta? **S2**: Well, it's my dad's birthday on Sunday. I wanted to cook dinner for him, but I don't know what to make! **S1**: Well, if I were you, I'd start by planning the main course. Does everyone in your family like pasta? **S2**: Actually, I was thinking I'd serve fish as the main course. My dad loves fish. But I'm not sure of what type of fish to cook. **S1**: You should think about serving tuna. It's a great source of protein and everybody likes it. **S2**: Thanks for the idea, but I prefer not to serve tuna. **S1**: Why not? **S2**: Well, you shouldn't eat too much tuna. It's over-fished and the high demand for tuna is really upsetting the ocean's ecosystem. I am trying to be more responsible about what I eat. **S1**: I see your point. Well then, why don't you try salmon instead? It isn't threatened and it can be used to create some delicious dishes, like my favourite, fish tacos. **S2**: Great idea! Thanks for the suggestion!

Track 036 GRAMMAR See Student's Book page 48.

Track 037 2 Barton Seaver is a food revolutionary. He wants to change how we look at food. When Barton was a child, he learnt a lot about food from his parents. They made sure that he tried a variety of foods from many different cultures. If Barton hadn't grown up in a family where food was so important, food might not matter to him as much. Thanks to his childhood, Barton understands the connection between food and culture. In his opinion, if food hadn't been so industrialised, we would still be more closely connected to what we eat. And if we had stayed more connected to our food, we would appreciate it more. Barton wants us to connect with our food, to share it with friends and family and to make it a part of who we are.

Track 038 4 You have already learnt that Barton Seaver is a food revolutionary. He wants to change the way we eat, especially seafood. According to Barton, if we hadn't overfished popular fish like tuna and cod, the ocean's ecosystem wouldn't be out of balance. Barton understands that fish is in demand because it's a healthy source of protein. He just wants people to try fish that are lower on the food chain. This would help restore the population of overfished species. Barton is trying to make changes today, but there were other food revolutionaries long before him.

Christopher Columbus is known around the world as an explorer. But Columbus is also one of the first food revolutionaries. If he hadn't travelled west in search of spices from India, he would never have arrived in the Americas. And if he and other explorers hadn't arrived in the Americas, foods such as tomatoes, potatoes, corn and cacao would not have been brought back to Europe. Without Columbus's exploration, the modern diet of many cultures would be very different.

Another food revolutionary is French chef Auguste Escoffier. Escoffier wanted to make the process of cooking more standard. He wrote down ingredients and necessary steps for each of his dishes. If Escoffier hadn't done this, we might not have recipes or cookbooks!

Track 039 4 LEARN NEW WORDS **protein** / Meat, fish and chicken contain protein that helps our bodies build muscles. **recipe** / It is important to follow the recipe so that your dishes taste good. **restore** / Scientists are working to restore populations of overfished species. **revolutionary** / A food revolutionary changes how people eat. **spice** / Adding spices can help make a dish taste better.

Track 040 2 LEARN NEW WORDS **consistent** / People need a consistent supply of food. **organic** / Organic foods are grown without chemicals. **sustainable** / It's best to choose foods that are produced in a sustainable way. **vertical** / Vertical farms use less space than traditional farms.

Track 041 3 WHILE YOU READ See Student's Book pages 50–51.

Track 042 GRAMMAR See Student's Book page 54.

In This Unit

Theme This unit explores the environmental impact of fun.

Content Objectives
Students will
- examine how their leisure-time activities impact the environment.
- analyse the environmental impact of bottled water and other plastics.
- identify ways to reduce, re-use and recycle.
- read about abandoned Olympic sites and how they can be re-used.

Language Objectives
Students will
- talk about the environmental impact of entertainment.
- defend their opinions.
- use passives to describe actions and processes.
- use gerunds and infinitives after verbs.
- write an essay about a fun activity that may be harmful to the environment.

Vocabulary
pages 60–61 *accessible, amusement, attraction, compost, consume, economic, enjoyable, excessive, facility, industry, litter, movement, participate, result, sensitive*
page 62 *benefit, non-profit, proactive, take action*
page 65 *challenge, damage, demand, harm, waste*
page 66 *cost, development, maintain, venue*
Vocabulary Strategies Prefix *pro-*; Use context of sentence

Speaking Strategy Defending your opinion

Grammar
Grammar 1 Describe actions and processes with passives
Grammar 2 Identify when to use gerunds and infinitives

Reading *Game Over*
Reading Strategy Identify the author's purpose

Video Scene 4.1: *The Footprint of Fans;* Scene 4.2: Meet Jack Johnson

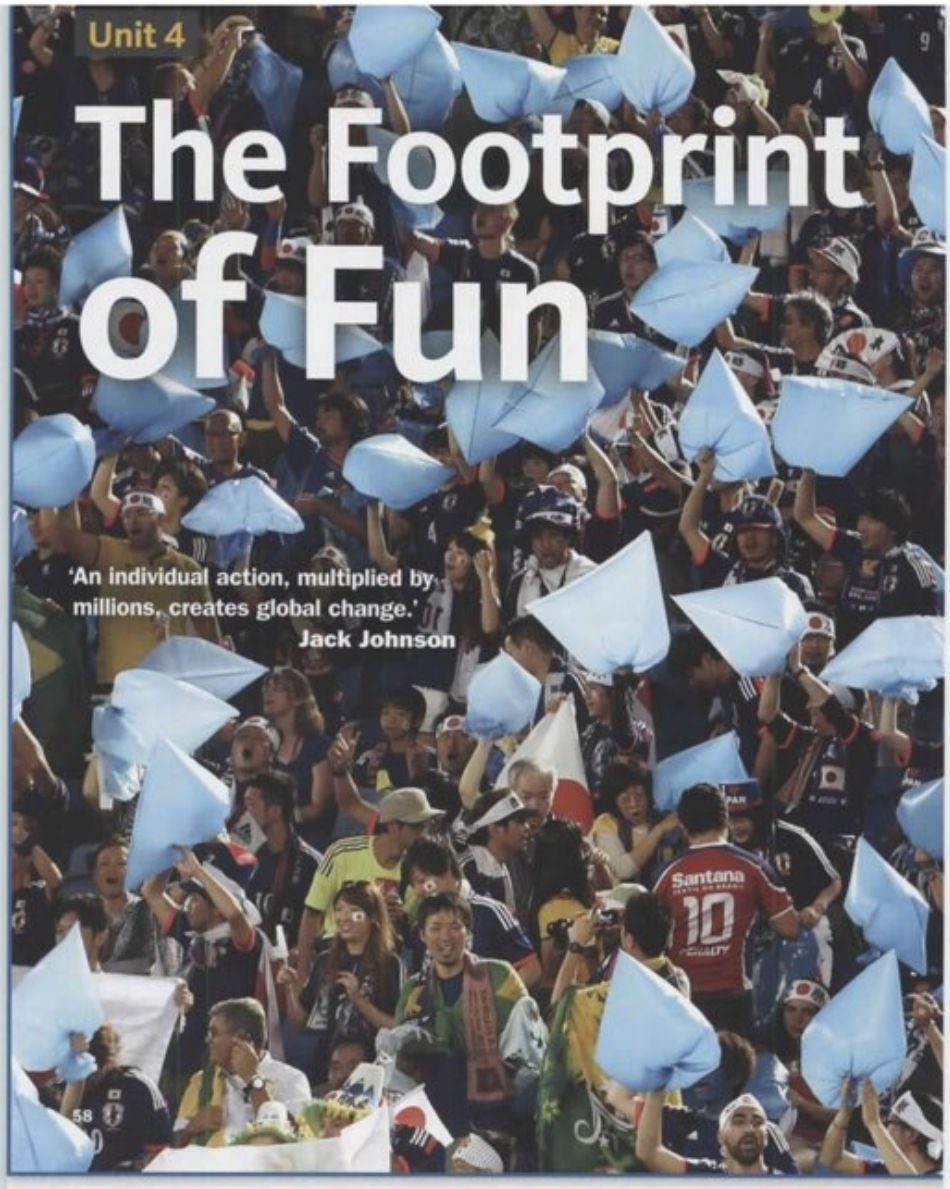
Writing Problem and solution essay

National Geographic Mission Reduce Your Footprint

Project
- Ad for clean fun
- Song about the environment
- Plan to reduce footprint

Pronunciation Expressing emotions with intonation

Pacing Guides 4.4.1, 4.4.2, 4.4.3



Introduce

- **Activate prior knowledge** Say *In Unit 3, we learnt about food and its impact on the environment. How does what we eat impact the environment?* (fishing affects the ocean's ecosystem, over-farming harms land, transporting food uses energy) Ask students to discuss the question with a partner and share their answers.

- Next, say *In this unit, we're going to talk about having fun and how it impacts the environment. What things do you do for fun?* Make a list of students' responses on the board. Then invite a volunteer to come to the board and tick any activities that he/she thinks may have a negative impact on the environment. Discuss the student's responses as a class.

- Say *Open your books at pages 58 and 59.* Ask questions such as the following to encourage discussion:
  Where do you think the people are? (at a sporting event)
  What have they got? (plastic bags)
  Why do you think they have got these things? (to clean up)



Japanese fans wave rubbish bags before cleaning up after a World Cup game.

TO START

1. When you attend a sporting event, do you clean up after yourself? Why or why not?
2. What fun things can you think of that might not be good for the environment? Which of them do you do?
3. What do you like to do for fun that doesn't harm the environment?

59

- Invite a student to read Jack Johnson's quote aloud. Say *Look at the photo. The fans are waving rubbish bags. If one individual uses the bag to pick up rubbish in the stadium, will that help create change?* Students may answer that it might help a little. Next, say *Now, what if all of the people holding bags use them to clean up rubbish? That would multiply the action. Would that be more of a change?* (yes) Ask students to give other examples of how change can occur when groups work together.
- Invite a student to read Question 1 on page 59 aloud. Encourage students to compare their behaviour at professional sporting events with their behaviour at school- or community-based sporting events.
- Before students answer Questions 2 and 3, ask them to consider actions that are harmful to the environment, such as using energy or creating litter. Brainstorm to create a class list of such actions. Then tell students to refer to the list in their discussions.

Extend

- Hand out **Worksheet 4.4.1**. Put students into pairs. Explain that partners will be writing about and discussing their footprint of fun.

UNIT OPENER

Objectives
Students will
- describe and discuss a photo.
- discuss how some of their pastimes might negatively impact the environment.

Resources Worksheet 4.4.1 (Teacher's Resource CD-ROM/Website); CPT: Unit Opener

BE THE EXPERT

About the Photo

This photo was taken in the *Arena das Dunas*, in Natal, Brazil, at a 2014 FIFA World Cup game. The fans in this photo were waving rubbish bags as they cheered on Japan in a match against Greece. Japanese fans then used the bags to clean up rubbish in the stadium after the game. Picking up rubbish is a common courtesy in Japanese culture. The practice is a way for the Japanese to show respect to their hosts.

Teaching Tip

Turn-taking Often when students are in pairs or groups, they talk over one another. Model appropriate turn-taking for the class. Invite a dependable student to discuss a question or complete a pair-work activity with you. Model listening attentively and waiting for the right time to speak. Repeat this with a small group of students.

Related Word

multiply

VOCABULARY

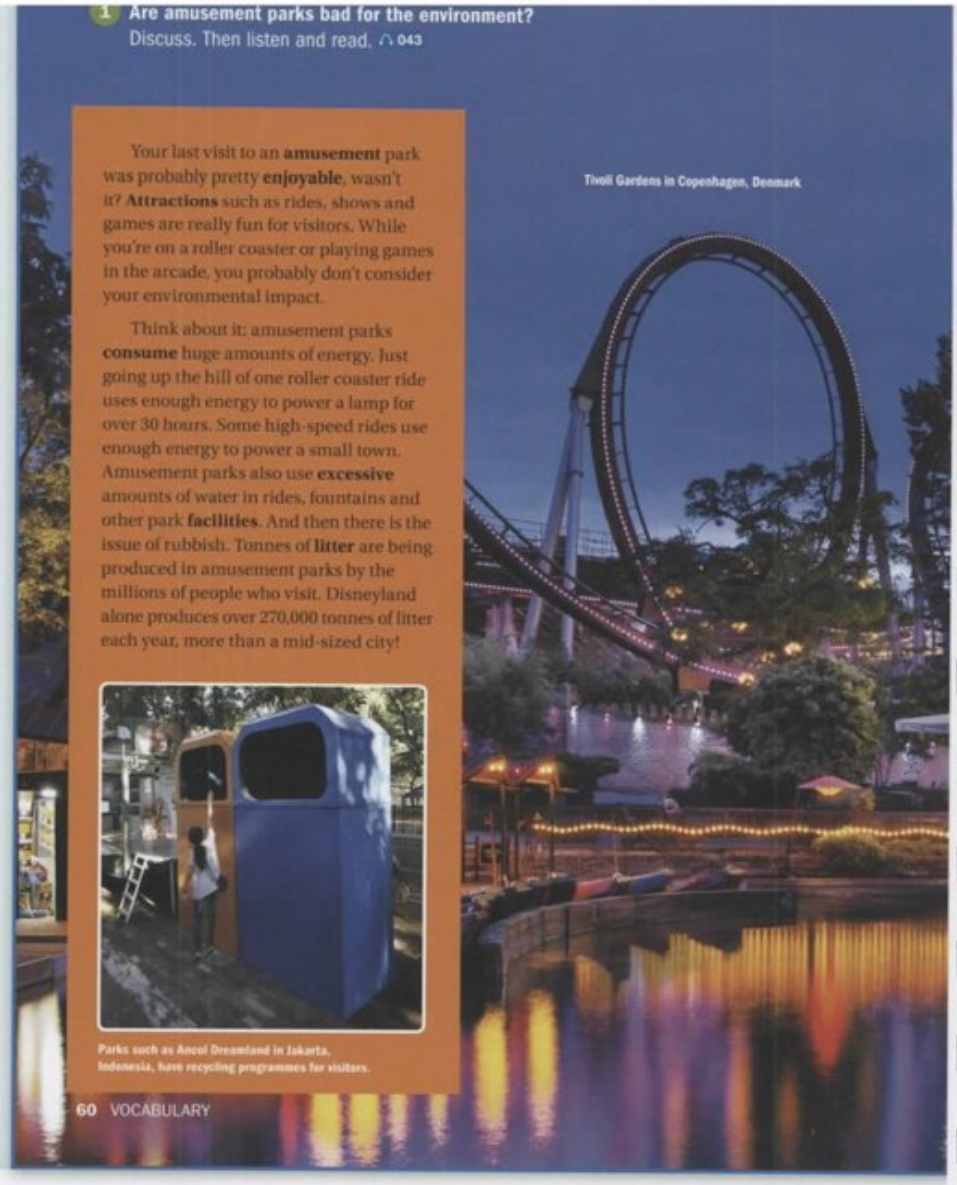
Objectives
Students will
- identify and use vocabulary related to the environmental impact of amusement parks.
- use new vocabulary to read about and discuss how amusement parks impact the environment and what they are doing to change.

Target Vocabulary *accessible, amusement, attraction, compost, consume, economic, enjoyable, excessive, facility, industry, litter, movement, participate, result, sensitive*

Content Vocabulary *compact, pipe, power, roller coaster, windmill*

Pronunciation Expressing emotions with intonation

Resources Tracks 043–044, 120–121 (Audio CD/Website/CPT); CPT: Vocabulary and Pronunciation; Pronunciation Answer Key (Teacher's Resource CD-ROM/Website)



1 **Are amusement parks bad for the environment?**
Discuss. Then listen and read. 043

Your last visit to an **amusement** park was probably pretty **enjoyable**, wasn't it? **Attractions** such as rides, shows and games are really fun for visitors. While you're on a roller coaster or playing games in the arcade, you probably don't consider your environmental impact.

Think about it: amusement parks **consume** huge amounts of energy. Just going up the hill of one roller coaster ride uses enough energy to power a lamp for over 30 hours. Some high-speed rides use enough energy to power a small town. Amusement parks also use **excessive** amounts of water in rides, fountains and other park **facilities**. And then there is the issue of rubbish. Tonnes of **litter** are being produced in amusement parks by the millions of people who visit. Disneyland alone produces over 270,000 tonnes of litter each year, more than a mid-sized city!

Parks such as Ancol Dreamland in Jakarta, Indonesia, have recycling programmes for visitors.

Tivoli Gardens in Copenhagen, Denmark

60 VOCABULARY

Warm Up

- **Build background** Write on the board the name of a popular amusement park in your region. Then ask *Who has visited this park?* Ask students to put their hands up to respond. Ask those students *What do you like to do at this park?* Write students' responses on the board.

- Ask *What rides do you like at this park?* Make a list of students' favourite rides and attractions. If students do not know words like *roller coaster* or *carousel*, ask them to provide the specific name of the rides at your local park. Then point to each name on the list and ask *What's this like? Describe it to me.*

- Say *We know that a lot of people go to parks and go on these rides. What do you think rides need to make them (go fast)?* Base your question on students' descriptions. Then discuss students' responses.

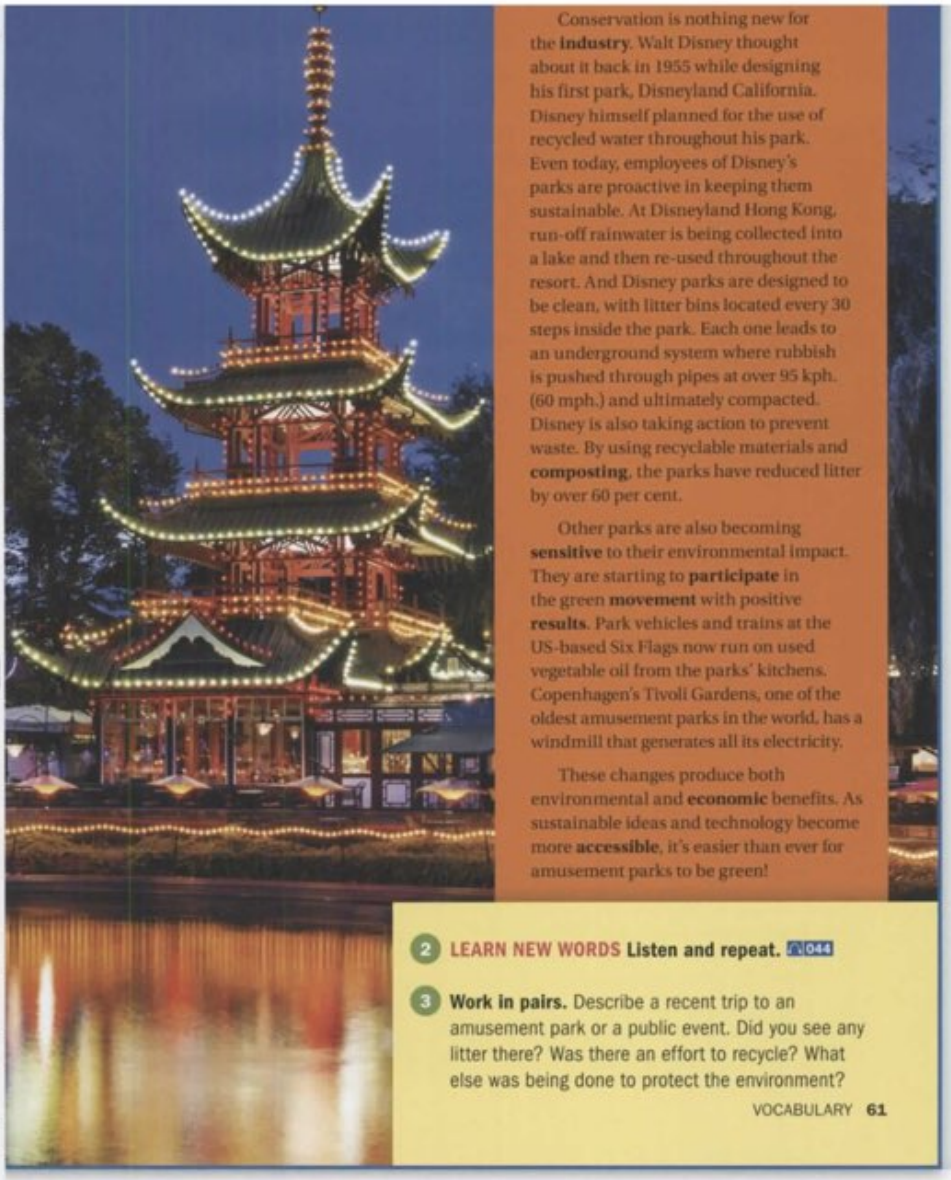
Present 1 2

- Tell students to open their books at pages 60–61. Point to the photo and say *This is an amusement park, just like (name of amusement park). We've described the rides at our favourite amusement park. We've also discussed some ideas about what makes the rides work. Now, think about how these rides might impact the environment.* Ask a student to read the question from Activity 1 aloud. Write the following on the board:

> Amusement parks are good/bad for the environment because _____.

- Tell students to discuss the topic in pairs and complete the sentence with their own ideas.

- Say *Rides aren't the only thing we enjoy at amusement parks. What else do you do at a park?* (eat, play



Conservation is nothing new for the **industry**. Walt Disney thought about it back in 1955 while designing his first park, Disneyland California. Disney himself planned for the use of recycled water throughout his park. Even today, employees of Disney's parks are proactive in keeping them sustainable. At Disneyland Hong Kong, run-off rainwater is being collected into a lake and then re-used throughout the resort. And Disney parks are designed to be clean, with litter bins located every 30 steps inside the park. Each one leads to an underground system where rubbish is pushed through pipes at over 95 kph. (60 mph.) and ultimately compacted. Disney is also taking action to prevent waste. By using recyclable materials and **composting**, the parks have reduced litter by over 60 per cent.

Other parks are also becoming **sensitive** to their environmental impact. They are starting to **participate** in the green **movement** with positive **results**. Park vehicles and trains at the US-based Six Flags now run on used vegetable oil from the parks' kitchens. Copenhagen's Tivoli Gardens, one of the oldest amusement parks in the world, has a windmill that generates all its electricity.

These changes produce both environmental and **economic** benefits. As sustainable ideas and technology become more **accessible**, it's easier than ever for amusement parks to be green!

2 **LEARN NEW WORDS** **Listen and repeat.** T 044

3 **Work in pairs.** Describe a recent trip to an amusement park or a public event. Did you see any litter there? Was there an effort to recycle? What else was being done to protect the environment?

BE THE EXPERT

About the Photo

Tivoli Gardens is a popular amusement park in Copenhagen, Denmark and is the most popular attraction in the country. The park, which opened in 1843, is the second-oldest amusement park in the world and it features over 30 thrill rides. The roller coaster in the photo, *Dæmonen (The Demon)*, goes 28 m. (92 ft.) into the air and can reach speeds of up to 77 kph. (48 mph.). In addition to rides, Tivoli Gardens offers games, restaurants, gardens and even an aquarium.

Pronunciation

Go to Student's Book page 145. Use Audio Tracks 120–121.

Expressing emotions with intonation There are many ways people alter their stress and intonation to change the meaning of words. Students may express emotion without realising it, depending on their first language. If your students' first language does not stress words the way English does, they may sound angry or disinterested to listeners. It is very useful to provide examples from television programmes or films so that students can better understand how intonation influences meaning.

games, watch shows) Guide students to think about how these activities impact the environment.

- 1 Play **Track 043** and tell students to listen and read. Discuss the reading with students. Ask:
  How does the energy used at an amusement park compare with the energy we use every day?
  How much litter do park visitors create?
  What is being done by the amusement park industry to reduce its footprint?
- 2 **LEARN NEW WORDS** Play **Track 044**. Tell students to listen and repeat. Then tell students to work in pairs to practise pronouncing the words together.
- Tell pairs to write two sentences about the environmental impact of amusement parks. Challenge pairs to use as many vocabulary words in their sentences as possible. Model by writing and saying *The attractions and facilities at amusement parks consume excessive amounts of energy.* Underline the vocabulary words used in your model. Then allow time for students to write their own sentences. When they finish, ask them to share their sentences with the class.

Practise 3 4 5

- 3 Say *We've talked about (name of local amusement park). Now, think about what the park itself is like. Is it clean? Is there litter? Are there recycling bins?* Discuss students' responses. Tell students to work in pairs to answer the questions for Activity 3. Encourage students to think of other entertainment venues such as carnivals, water parks or festivals. After students work in pairs, have a class discussion. Compare the places they described with the local theme park.

VOCABULARY

Objectives

Students will

- practise using vocabulary related to the environmental impact of entertainment.
- use a vocabulary strategy to learn new words.

Target Vocabulary *benefit, non-profit, proactive, take action*

Vocabulary Strategy Prefix *pro-*

Content Vocabulary *biofuel, venue*

Resources Online Workbook/Workbook pages 34–35; Worksheet 4.4.2 (Teacher's Resource CD-ROM/ Website); Tracks 045–046 (Audio CD/ Website/CPT); CPT: Vocabulary

4 Read and write the words from the list. Make any necessary changes.

accessible	consume	economic	enjoyable	excessive
industry	litter	participate	result	sensitive



It's good to know that the music ___industry___ has environmental champions like Jack Johnson. Jack is a singer and surfer who is very ___sensitive___ about nature. He was concerned about the negative impact his concert tours were having on the environment. So he decided to cut out ___excess___ waste and ___consume___ less energy. The ___result___ of that decision is that Jack now fuels his tour buses with biofuel, and performs at places that are ___accessible___ by public transport. He also invites non-profit-making organisations to ___participate___ in educating fans about sustainability at his concert venues.

5 LEARN NEW WORDS Listen to these words and match them to the definitions. Then listen and repeat. 045 046

benefit	non-profit	proactive	take action

___benefit___ 1. a positive effect

___proactive___ 2. preparing for possible future problems

___take action___ 3. do something about a problem

___non-profit___ 4. not focused on making money

6 YOU DECIDE Choose an activity.

1. **Work independently.** Research what another well-known person or organisation is doing for the environment. Share what you learnt with the class.
2. **Work in pairs.** Keep a journal of what you throw away in a day. Compare with your partner. How much waste did you produce? How can you reduce the amount of waste you produce?
3. **Work in groups.** Do you think musicians should be responsible for making their events more environmentally friendly? What can they say or do to make their fans more proactive in protecting the planet? Discuss. Then list three suggestions.

62 VOCABULARY

- Tell students to turn to page 62. Point to the photo. Say *This is Jack Johnson. He's a musician who wants to make sure his concerts don't have a negative impact on the environment.* Ask *How can concerts have a negative impact?* Discuss.
- 4 Direct students' attention to Activity 4. Ask a student to read the words in the box aloud. Review each word's meaning. Tell students to scan the paragraph for any unfamiliar words. Point out the word *biofuel* and explain that it's fuel produced through biological processes and it's less harmful for the environment than traditional fuel. Give students time to complete the activity independently and then tell them to compare their answers with those of a partner.
- 5 LEARN NEW WORDS Play **Track 045** once and tell students to write each word next to the definition. Play it again and tell students to check their work. Then play **Track 046** and ask students to repeat each word and sentence. Review answers to items 1–4 as a class. Then ask students to look for each word in context on pages 60–61.

- **Vocabulary strategy** Point out the word *proactive* on page 62. Say *In this context, we're learning the word* proactive *to describe planning for events so that they don't have a big impact.* Write the word on the board and underline the prefix *pro-*. Point out that it means *earlier than*. Then cross out the prefix *pro-* and ask *What does* active *mean?* (involved, doing something) Say *When somebody is* proactive, *they get involved early to prevent a problem.*

Apply 6

- 6 YOU DECIDE Ask students to choose a project. Read aloud each of the three activity options. Then tell students to form pairs or groups if they choose the second or third activity options. Suggest to students who choose the first activity to look to their own role models to see if they are doing positive things to help the environment. If time allows, ask students who choose the second activity to keep track of their waste for longer than just one day. Tell students who choose the third activity to compare their suggestions with another group.

Extend

- Refer all students to Activity 6, item 3. Tell each student to think of suggestions for how musicians and other performers can make their events more environmentally friendly. Model making a polite suggestion that could be sent on a social media outlet. Then tell students to write and share one of their suggestions with performers via social media. Encourage students to report on any responses that they receive from the performer that they contacted.

- If time allows, hand out **Worksheet 4.4.2**. Explain that students will use vocabulary words to talk and write about the environmental impact of fun. They will also write about ways the entertainment industry can be proactive in protecting the environment.

Consolidate

- Say *Let's find out what you've learnt about the footprint of fun. I'll say a word or phrase and you tell me if you think it's part of the problem or part of the solution.* Model by saying *participating in the green movement* and invite a student to identify this phrase as part of the solution. Then, one by one, say words or phrases using the new vocabulary, such as *creating litter* (problem), *taking action* (solution), *being sensitive to the environment* (solution), *using excessive amounts of water* (problem), *composting* (solution), *being proactive* (solution) and *consuming excess energy* (problem). Add any other words and phrases that you may have mentioned in your class discussions.

BE THE EXPERT

Vocabulary Strategy

Prefix *pro-* The prefix *pro-* has several meanings. Explain that in this context, it has origins in Greek and means *earlier than* or *in front of*. Other words that include this meaning are *prologue* (text that comes before a book) and *proclaim* (to say in front of others). Point out that the prefix *pro-* also has another, Latin-based meaning: *in favour of*. Students have seen this meaning in the words *promote* or *progress*. They may have also seen its hyphenated use in words such as *pro-war*.

About the Photo

The photo on page 62 shows American singer-songwriter Jack Johnson. Jack is known for his soft acoustic rock music. He has released nine albums and has contributed to many compilations and soundtracks. In addition to being a musician, Jack is also a surfer and an environmental activist. He donates much of the money raised at his concerts to ecological organisations.

Formative Assessment

Can students

- identify and use vocabulary related to the environmental impact of amusement parks?

  Ask *What are two ways that amusement parks can negatively impact the environment?*

- use new vocabulary to read about and discuss how amusement parks impact the environment and what they are doing to change?

  Ask *How are people in the amusement park industry being proactive in reducing their footprints?*

Workbook For additional practice, assign Workbook pages 34–35.

Online Workbook Vocabulary

SPEAKING STRATEGY

Objective
Students will
- defend their opinions.

Speaking Strategy Defending your opinion

Academic Language *defend*

Content Vocabulary *biodegradable, race, smoke*

Resources Online Workbook; Worksheet 4.4.3 (Teacher's Resource CD-ROM/ Website); Tracks 047–048 (Audio CD/ Website/CPT); CPT: Speaking Strategy

Materials a bag *(optional)*

SPEAKING STRATEGY 047

Defending your opinion

I heard that racing cars use a lot of fuel.
I read that they use around 20,000 litres (5,300 gal.) in a race.
Most people would agree that there are greener forms of entertainment.
As far as I know, these industries are trying to go green.
All I'm saying is that electric cars and aeroplanes will change the industry.



1 **Listen.** How do the speakers defend their opinions? Write the phrases you hear. 048

2 **Read and complete the dialogue.**

Jacob: Hey, Lily. My family and I are going to the air show on Saturday. Would you like to join us?

Lily: Well, air shows are a little too noisy for me. Most people would agree that they're really bad for the environment, too.

Jacob: Well, it's true that air shows do consume a lot of fuel. But, as far as I know, the industry is developing new, more efficient planes. I read/heard that an electric plane might fly all the way around the world.

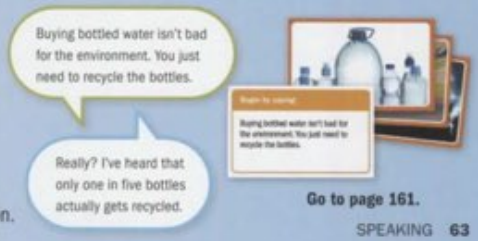
Lily: OK, but the planes at the show won't be electric. Those planes burn a lot of fuel *and* blow smoke into the environment. All I'm saying is that they have a huge environmental impact.

Jacob: Actually, I read/heard that the coloured smoke is biodegradable and doesn't harm the environment.

Lily: Well, the fuel that's burnt certainly does. Sorry, Jacob. I hope you have fun, but I would rather not come. Let's get together on Sunday instead. You can tell me all about the show.

3 **Work in pairs.** Take turns giving and defending your opinion using the information on the cards.

4 **Work in groups.** Discuss the information on the cards again. This time, express your own opinion.



Go to page 161.

Warm Up

- **Revisit** Say *You've already learnt how to ask for and give opinions. What is an opinion?* (a personal view or belief) Write two facts and two opinions about the environment on the board. For example, write *Some parks create 300,000 tonnes of litter a year* (fact) and *I think it's important to keep parks clean* (opinion). Invite students to read your sentences aloud and identify them as facts or opinions.
- Put students into pairs. Give topics that review this unit or previous units' content. Ask students to state an opinion on the topic and then ask their partner to agree or disagree.
- Say *We've reviewed what an opinion is. When you give an opinion, it's important to be able to defend it or to give reasons why you have that opinion.*

Present 1

- Tell students to open their books at page 63. Say *Listen as you read the phrases in the yellow box. These phrases are useful for defending an opinion.* Play **Track 047**. Say *An opinion is that racing cars are bad for the environment. The first three sentences are ways to defend that opinion.* Invite individual students to read each of the three sentences. Then say *Another opinion is that the racing industry isn't so bad. The last two sentences are ways to defend that opinion.* Ask two more students to read those sentences aloud.
- 1 Say *Now listen as two people have a conversation about car racing. Pay attention to their opinions and how they defend them.* Play **Track 048** and tell students to write the phrases used to defend opinions.

Practise 2

- 2 Say *This conversation is about air shows. Look at the photo. You can see several aeroplanes at an air show.* Tell students to scan the dialogue for unfamiliar words. Explain that *biodegradable* means that something can be broken down by natural processes.
- Allow time for students to complete the activity independently. Then ask a pair to read the dialogue aloud. Ask students to give their own opinions on car racing and air shows. Remind them to defend their ideas.

Apply 3 4

- 3 In pairs, direct students to page 161. Tell them to cut out the cards. Say *One partner gets the red cards; the other gets the orange cards.* Tell students to divide the cards. Then ask two students to read the model on page 63.
- **Model** Take one of the cards that says *Begin by saying* and hold it up to show the photo. For example, say *This card is about plastic bags. My partner will look for the matching card about plastic bags.* Hold up the corresponding red card. Read the statement on the orange card aloud. Then say *I just gave an opinion – that you don't need to use reusable bags. My partner will respond to my opinion with the information on the other card.* Model using one of the speaking strategy phrases with the response. For example, say *As far as I know, a trillion plastic bags are consumed each year.* Then hold up the original card and say *Now, I should defend my opinion. For example, I might respond, 'Well, I read that you can recycle plastic bags'.* Now ask students to do the activity.
- 4 Tell students to read the *Begin by saying* cards again and decide if they agree or disagree with the statement. If they disagree, tell them to state their own opinion. Partners will use the same statistics to respond. When they finish, collect their cards.

Extend

- Put students into groups of three or four. Ask one student to name and describe his/her favourite place or free-time activity. Other students in the group will ask why he/she likes this place or activity so much. The first student uses the strategy to defend his/her opinion. Then tell group members to swap roles.
- If time allows, hand out **Worksheet 4.4.3**. Explain that students will use the worksheet to defend their opinions.

Consolidate

- Put the *Begin by saying* cards from Activity 3 into a bag. Discard the other cards. Tell students to pass the bag around, take a card and respond to the opinion using statistics they remember from Activity 3.
- Take a student's card and read the opinion. Have the student share his/her response, using phrases to defend it. Repeat with as many students as possible.

BE THE EXPERT

Strategy in Depth

There are a number of other ways to defend an opinion in English. Here are a few examples:

Anyone would agree that ...
As far as I'm concerned ...
Everyone knows/agrees ...
Few people would deny that ...
It's assumed that ...
It's clear that ...
Research shows that ...

Formative Assessment

Can students
- defend an opinion?

Say *Your opinion is that recycling plastic water bottles is really important. How can you defend that opinion?*

Online Workbook Speaking Strategy

GRAMMAR 1

Objectives

Students will

- identify the form and use of passives in the past, present and future tenses.
- use passives to talk about the environmental impact of entertainment and the use of bottled water.
- identify and use new words related to the environmental impact of plastic.

Grammar Passives: Describing actions and processes

Target Vocabulary *challenge, damage, demand, harm, waste*

Academic Language *graphic, underline*

Content Vocabulary *dirty, jellyfish, mistake, pass on, refill, tap water, transform*

Resources Online Workbook/Workbook pages 36–37; Tracks 049–052 (Audio CD/Website/CPT); CPT: Grammar 1

Materials an empty plastic water bottle

GRAMMAR 049

Passives: Describing actions and processes

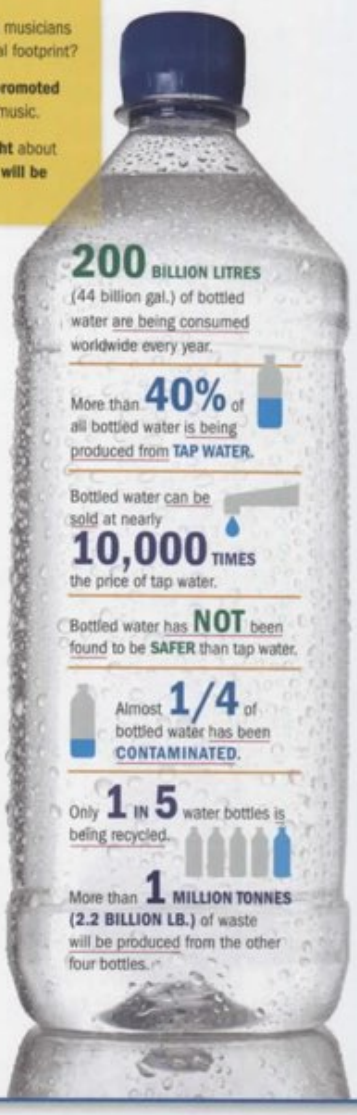
What have musicians done to reduce their ecological footprint?	What **has been done** by musicians to reduce their ecological footprint?
Jack Johnson's music is promoting sustainability.	Sustainability **is being promoted** through Jack Johnson's music.
Jack can teach his fans about conservation. They will pass on the ideas to their friends.	Jack's fans **can be taught** about conservation. The ideas **will be passed on** to friends.

1 **Read the information in the graphic.** Underline the examples of the passive.

2 **Listen.** Complete the sentences. 050

So you *have been taught* that some fun activities can harm the environment. But Jack Johnson is working towards his goal that the environment *will not be impacted* by his concerts. Water refill stations *have been placed* throughout his concert venues. Fans *are being encouraged* to bring their own reusable water bottles. And Jack's team works together with farms to make sure that sustainable food *can be sold*. Jack hopes that his message is coming through, and that his fans *will be transformed* by their experience at his show.

3 **Work in groups.** Talk about environmental improvements to your school or city. What has been done to protect the environment? What was done recently? What else can be done? What do you think will be done in the near future? Use the passive in your discussion.



Warm Up

- **Build background** Hold up an empty plastic water bottle. Ask *What is this? How often do you drink bottled water?* Invite students to share their responses. Say *Consider that there are seven billion people on Earth. If everyone drinks bottled water as often as we do, that has a big impact on the environment.*
- Write the following questions on the board:

> How much bottled water is being consumed in this school every day? In our city? In the world?
>
> How is the environment being affected by the production of so many bottles?
>
> What can be done to change people's attitudes and behaviours about bottled water?

- Discuss the questions as a class. Point out that students can just make their best guesses.

4 LEARN NEW WORDS Read about the effects of plastic on the environment and what you can do about it. Then listen and repeat. 051 052

Recently, the worldwide **demand** for plastic has exploded. Plastic is all around us – our gadgets, dishes, furniture – almost everything is made of plastic these days! Plastic is convenient, but most of us never think about the **damage** caused by using too much plastic.

Jack says, '**Challenge** yourself to reduce your plastic footprint.'

Why should we do this? And how can we?

Litter from plastic products dirties our cities. Much of the plastic ends up in landfill, where it can last up to 500 years! But worse is that our oceans are being polluted by plastics. There are around eight million tonnes of plastic **waste** in the world's oceans. Over 700 species of marine wildlife have been **harmed** by this pollution. Many animals mistake plastic for food. Over 100,000 marine animals die each year from eating plastic. Others might survive, but some of them end up on our plates. So, humans are also being harmed by plastic in the oceans.

To make a positive change, we can:

- Reduce the amount of plastic we use each day.
- Re-use by carrying our own water bottles and bags.
- Recycle any additional plastic we use.

Whether you're going to school, to the park or to a concert, think about your footprint.



A sea turtle tries to eat a plastic bag that it has mistaken for a jellyfish.

5 Work in pairs. Think about Jack's message. Write five things that can be done to reduce the use of plastic in your daily life. Use the passive.

6 Work in groups. Research how bottled water consumption and recycling have changed over the years. Present what you learnt to the class, using the passive.

Ten per cent more bottled water is being consumed each year.

Present

- Tell students to open their books at pages 64–65. Say *You've already learnt the present passive and the past passive tenses. In today's lesson, we're going to use passives in a variety of tenses.* Re-read the questions from the Warm Up. Then ask students to underline the passive forms used in each question.

- Direct attention to the yellow box at the top of page 64. Read the first question aloud. Ask *Who's doing the action in this question?* (musicians) *What's the verb, or action word, in this question?* (have done) Say *In this question, we're asking about past actions of the musicians.* Read the question to the right aloud. Say *Notice how we're now focusing on the action – what has been done – not the people doing the action. In the passive, the focus is not on who does something, but on the action itself.*

BE THE EXPERT

Grammar in Depth

Students should already be familiar with the passive voice in both the present and the past. Remind students that the passive is used when the emphasis is on the action, not on the person or thing doing the action. The passive voice is not commonly used in spoken language. Rather, it's used in writing, especially in journalism and academic texts.

Point out that the last part of the formula on page 128 is optional – they do not always need to include *by (person/thing)*. Explain that students can separate the form of the verb *be* and the past participle with an adverb. Give examples:

Bottled water will always be sold at events.

Plastic has never been used by this company.

Turtles must really be protected by conservationists.

About the Photo

The photo shows a sea turtle trying to eat a plastic bag. Plastic waste is a serious threat to marine animals, with more than 100 million animals killed each year due to plastic. According to scientists, approximately 50 per cent of sea turtles are eating harmful plastic. Plastic is harmful to turtles because it can be toxic. It can also block other food from getting into their mouths and it can cause holes to develop in their digestive systems.



- Repeat this instruction with the following pairs of sentences, pointing out the tenses and use of modal verbs in each sentence. Then play **Track 049** and tell students to read along, underlining the passive voice in the examples.

- Say *In this lesson, we'll see passives in different tenses. No matter what tense you're using, you need to follow the same pattern.* Write the following on the board:

> (what's receiving the action) + (a form of *be*) + (past participle) [+ (by) + (who's doing the action)]

- Point to (*a form of* be) and say *So, you need to use the correct form of* be: was *or* were, has been *or* have been, is *or* are *or* will be. Point out that students can also use modal verbs such as *can* or *should* with passives.

- Next, point to *(past participle)* and say *You also need to use the past participle.* Give examples of regular past participles (promoted, consumed, produced). Direct students to page 148 for a list of irregular past participles. Then tell students to scan pages 64–65 for irregular past participles found on these pages. (done, found, made, taught, sold)

Practise 1 2 3

- 1 Say *Look at the graphic. What's it about?* (bottled water consumption) Invite individual students to read each sentence aloud. Then tell students to work independently to underline the passive forms used in the graphic. As you review their work, ask students to say whether the form they underlined is in the past, present or future or if a modal verb is used. Challenge students to restate each statistic using the active voice.

- 2 Play **Track 050** once and tell students to just listen. Play the track again and tell students to write the passive forms they hear in the spaces. Then play it a final time and tell students to check their work.

- 3 **Model** Before students begin, draw a three-column table on the board and label it: *Past actions, Actions that can be done now* and *Future actions*. Point out that students can discuss changes at their school or in the area where they live. Guide students to think of examples. Model thinking aloud by saying *I know that there are water fountains in all of the parks. This is better than bottled water, so I'll write* water fountains. Write these words on the board and then say *Water fountains have been installed in the parks.* Emphasise the passive voice as you say this sentence.

- Allow time for students to complete the activity. Walk around the room to listen to their discussions, checking to make sure that they're using different tenses of the passive voice. When groups finish, ask them to share their discussions with the class.

Apply 4 5 6

- 4 **LEARN NEW WORDS** Say *We've talked about bottled water and how it can harm the environment. Now we're going to read about why plastic is so harmful and what we can do about it.*

- Point to the reading on page 65. Say *Look at the words in bold. You may have seen these words before. Notice how they're used in this context.* Students may remember seeing the words *challenge, demand* and *damage* earlier. You may want to explain that these words can be used as different parts of speech. Play **Track 051** and tell students to follow along. Then ask students to identify the new words as nouns (person, place, thing or idea) or verbs (actions).

- Say *Let's listen to the new words again and this time, we'll repeat the word and a sentence with the word.* Play **Track 052** and ask students to repeat what they hear.

- 5 **Give examples** Put students into pairs. Read the instructions aloud and guide students to think of ideas. Say *Think about how you use plastic every day. It's not just drinking bottled water. You may use and throw away plastic forks at lunch, for example. You might also buy foods wrapped in plastic.* Work as a class to brainstorm ways plastic is used. Then tell

students to work from those examples to find ways to reduce their use. Point out that students' answers should use modals such as *can, should* or *must,* followed by passives.

- 6 Before students begin this activity, tell them to review the statistics in the graphic on page 64. You may want to research and provide a list of websites that can offer helpful information about bottled water consumption. Remind students to look for information about the past and present. Students may even include information in the future based on current trends. Challenge students to use at least three different tenses in their responses.

Extend

- Tell students to work in groups to locate at least three plastic items that are being used in the classroom. Tell students to write how each item is used. Remind students to use the passive in their sentences.
- After students finish, tell them to think about each of the items they chose to write about. Ask *Are these items really necessary? Could we go without the item in the classroom? Or is there another item we could use instead that isn't plastic?* Tell students to consider the questions for each item and write a suggestion for a different product or method that could be used so that the class can have a lower carbon footprint. Point out that students must use modals and passives as they make their recommendations.
- Ask a student from each group to read aloud their group's sentences and suggestions. After all groups have shared their ideas, ask the class to decide which are the most practical and realistic. You may want to award bonus points to the group with the best ideas.

Consolidate

- Write the following sentences on the board and tell students to rewrite them using the passive voice.

> People should use fewer plastic bottles.
> Students are discussing ideas for reducing plastics in school.
> Plastic has been harming marine wildlife in recent years.
> You will share the information you learnt about plastic with your friends.

- After students finish, ask them to read their sentences aloud. If time allows, tell students to write one additional sentence about plastics using the passive voice.

BE THE EXPERT

Teaching Tip

When students are asked to discuss difficult or abstract topics, always provide examples to get them started. You can provide one or two examples yourself or you can have the class work together. Brainstorming as a class is a good way to get everyone thinking about what's to be discussed. Discussing ideas as a class before beginning an activity is also a good way to eliminate any ideas that may be off-topic or inappropriate.

Formative Assessment

Can students

- identify the form and use of passives in the past, present and future tenses?

  Say *Name something that has been done to protect the environment, something that should be done and something that will be done.*
- use passives to talk about the environmental impact of entertainment and the use of bottled water?

  Ask *How has the consumption of bottled water changed over the last century?*
- identify and use new words related to the environmental impact of plastic?

  Say *Explain how plastic is harming the environment.*

Workbook For additional practice, assign Workbook pages 36–37.

Online Workbook Grammar 1

READING

Objectives
Students will
- read about abandoned Olympic sites and how they can be re-used.
- identify and use new words from the reading.
- identify the author's purpose and use it to better understand the reading.

Reading Strategy Identify the author's purpose

Target Vocabulary *cost, development, maintain, venue*

Vocabulary Strategy Use context of sentence

Content Vocabulary *ghost town, host, long-term, medal, sailing, torch*

Resources Online Workbook/Workbook pages 38–39; Worksheet 4.4.4 (Teacher's Resource CD-ROM/ Website); Tracks 053–054 (Audio CD/ Website/CPT) CPT: Reading

Materials coloured paper (two different colours; enough of each colour for half the class)

1 BEFORE YOU READ Discuss in pairs. Based on what you have learnt so far in this unit and the photos on this page, what do you think the reading is about?

2 LEARN NEW WORDS Find these words in the reading. What do you think they mean? Use the other words in the sentence to help you. Then listen and repeat. 053

cost development maintain venue

3 WHILE YOU READ Think about the author's purpose. 054

4 AFTER YOU READ Work in pairs to answer the questions.

1. What is a benefit of hosting the Olympics?
2. What are two negative results of hosting the Olympics?
3. What was the total cost of the 2004 Summer Olympics?
4. Give an example of how an Olympic site is being re-used.
5. What should Olympic host cities do to avoid ending up with a 'ghost town'?

GAME OVER

After the torch goes out, what happens to Olympic sites?

How would you feel if your city were chosen to host the Olympic Games? The best athletes in the world would be right outside your door! The games bring excitement and attention to your region, as well as a lot of development. But the Olympics also have great economic and environmental costs. People have even been forced to leave their homes to make way for the Olympics. And once the last medal is awarded and the athletes have gone home, you may be left with a ghost town.

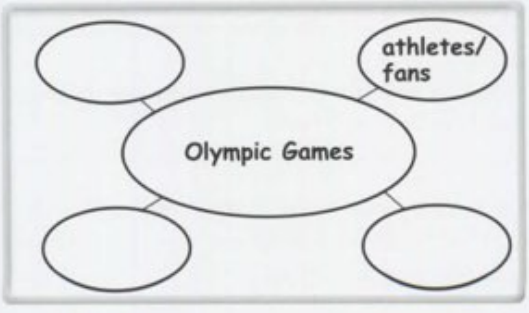
Greece is the birthplace of the Olympics. So the country was excited to welcome the 2004 Summer Olympics back to Athens.



An abandoned Olympic training pool in Athens, Greece

Warm Up

- **Activate prior knowledge** Explain to students that they're going to read about the Olympic Games. Ask *Has anyone watched the Olympic Games on TV?* Students will most likely answer *yes*. Next, draw an idea web on the board:



- Point to the middle of the web and say *Let's think about what goes on at the Olympics. I know that a lot of athletes and fans travel to watch the game.* Model writing *athletes/fans* in a circle of the web. Then tell students to choose a partner and create their own idea

After years of preparation, and nearly U.S. $11 billion spent, the athletes arrived, and the games began. The 2004 Summer Olympics were a success. But shortly after they ended, the venues began to fall apart. Most of them sit empty today. The Olympic training pool is used by frogs, not athletes. Until recently, the Greek government was still paying to maintain these buildings, bringing the total cost of the 2004 Summer Olympics to over U.S. $50 billion. Athens isn't alone. Many Olympic sites have become ghost towns. The abandoned site of the 1936 Summer Olympics is still standing in Berlin, nearly a century after it was built.

With good planning, Olympic venues can be successfully re-used. In many cities, former Olympic stadiums continue to host sporting events. Barcelona, host of the 1992 Summer Olympics, has been creative in re-using its venues. Barcelona's Port Olímpic, built for the Olympic sailing competition, is now a popular tourist destination, with a museum, hotels, shops and restaurants. Tourists visiting Beijing can now enjoy a water park experience at the Water Cube, where swimming records were broken during the 2008 Summer Olympics.

Hosting the Olympic Games is an honour. But the games only last 17 days! Olympic venues shouldn't simply be designed to be used for a couple of weeks. These facilities can improve a region only when they're designed for the long-term benefit of everyone. Architects who create quality facilities that serve a community for the years after the Olympics deserve a gold medal!

The Water Cube in Beijing, China





5 **Work in pairs.** Think about the information in the reading. Why do you think the author wrote this text? What is the author's message?

6 **Discuss in groups.**

1. Would you like the Olympics to come to your country? Why or why not?
2. Imagine your city or town has been chosen to host the Olympic Games. What needs to be built? How will your city change?
3. What could the International Olympic Committee do to make sure that the venues designed for the Olympic Games don't turn into 'ghost towns'? Give two or three examples.

READING 67

web for the Olympics. Give students several minutes to write as many ideas as they can.

- Discuss students' idea webs. Invite students to share Olympic stories that are meaningful to them.

Before You Read 1 2

- 1 Tell students to open their books at pages 66–67. Say *We've talked about the Olympic Games. Think about our discussion as you make your predictions.* Give students several minutes to discuss their ideas for Activity 1. Then invite pairs to share with the class.

- Hold up your book, showing pages 66–67. Say *Both of these photos show former Olympic swimming pools. What's the difference?* (the larger photo shows an abandoned pool; the smaller photo shows one still being used) Point to the large photo and say *This swimming pool is no longer in use. It was abandoned after the Olympic Games. We will read about what happens to Olympic sites after the games end.*

BE THE EXPERT

Strategy in Depth

Identify the author's purpose When giving students a text, it can be helpful for them to consider the question *Why did the author write this?* Remind students that they have written texts with the goal of informing, entertaining or persuading others. The authors of texts that they read have the same goals. Authors may achieve these goals with fiction and non-fiction texts. Point out that a work of fiction can still inform, for example. Often, authors seek to accomplish more than one of the goals – perhaps all three – within a single text.

Remind students to consider who is writing the text. The author's point of view in relation to the topic can affect its message. Knowing about the author can help students identify key points of his/her message.

Vocabulary Strategy

Use context of sentence When learning new words, it's important to look at the context that they're used in. Explain to students that they can look for other words in the sentence to give clues about meaning. A familiar adjective will help students understand an unfamiliar noun, for example.

About the Photo

The large photo shows a deserted training pool in the Olympic Village in Thrakomakedones, north of Athens. The photo was taken in 2014, ten years after Greece held the 2004 Athens Olympic Games. Many of the buildings of the Olympic site have been abandoned, but others are still used for conferences, weddings and similar events.

Related Word

float



- 2 **LEARN NEW WORDS** Say *We're going to look at some new words that will help us learn about the Olympic sites.* Say the first word aloud: *cost*. Ask students to repeat the word. Then tell them to scan the reading to look for the word.

- **Vocabulary strategy** Write the word *cost* on the board. Read aloud the sentence from the reading with *cost*. Then say *We see that the Olympics have environmental and economic costs. Let's read the next sentence for an example.* Read the next sentence aloud. Then say *Being forced to leave means you lose your home for the Olympics. So cost must mean 'the thing we lose in order for something else to happen'.*

- Repeat this instruction for the remaining words. Then play **Track 053**. Tell students to listen and repeat each word and sentence.

While You Read 3

- 3 Say *Now we're going to read about what happens to different Olympic sites after the games end.* Play **Track 054** and tell students to follow.

- Say *Let's re-read the text. As we're reading, think about the author's purpose, or reasons the author wrote this. When an author writes a text, he or she might want to inform us of something. The author might also want to entertain us with a good story. Or, he or she might want to persuade us, or convince us, to believe him or her. Often, the author writes with more than one purpose in mind. For example, a text can inform and persuade, or entertain and inform, or all three!*

- Read aloud the first paragraph and then pause. Ask *What does the author do in this paragraph – inform, entertain or persuade?* (inform, persuade) Ask students to give examples from the paragraph to show how the author is trying to inform and persuade the reader. If students have difficulty identifying what the author is doing, explain it to them. Say *The author gives us facts about the Olympics: they bring development and excitement, but at a cost. The author also suggests that we may be left with a ghost town after the games. The author is persuading us to think twice about the value of hosting the Olympics.*

- Continue the reading as a class, pausing after each paragraph to identify whether the author is trying to inform, entertain or persuade. Tell students to take notes during the discussion.

After You Read 4 5 6

- 4 Put students into pairs. Tell them to discuss their answers to the questions. Remind students to look for information and examples from the text to support their answers. Review their responses as a class.

- 5 Read the questions aloud. Then say *Look at the notes you took as we re-read the text. Use your notes to write a short summary of the author's purpose and message. Remember, authors might write a text to inform, entertain, persuade or all three!*

- Tell students to compare notes as they discuss the questions in pairs. Pairs should then come up with a sentence summarising the author's purpose and identifying the author's message. Discuss as a class, encouraging students to cite evidence from the text in your discussion. If students have trouble summarising the author's purpose, explain that it's to provide information on the risks of hosting Olympic Games and what can be done to prevent ghost towns. Explain that the author's message is to persuade readers that Olympic sites should be developed with long-term goals in mind.

- 6 Divide the class into small groups to discuss the topics. If the Olympic Games have come to your country or region, ask students to use real-life examples about the effects in their discussions. Encourage students to illustrate their ideas for Question 2.

Extend

- Tell students to work in small groups to find another example of successful re-use of an Olympic site and another example of a site that hasn't been maintained. Ask students to present what they learn to the class, showing photos if possible.

- **Worksheet** If time allows, hand out **Worksheet 4.4.4** in class. Remind students to review the new words presented on page 66.

Consolidate

- Hand out coloured paper to students. Give half the students one colour and half the students another colour.

- Say *Our town is being considered to host the next Olympic Games. If you've got a (red) paper, write a short message to support the idea. If you've got a (yellow) paper, write a message to oppose the idea.* Point out that students only need to write one or two sentences. Collect students' messages and read several from each side aloud to the class. Invite others to agree or disagree with each statement.

BE THE EXPERT

Teaching Tip

Always take note of students' questions. Keep track of vocabulary, comprehension or grammatical questions that they have in your book or in a small journal. Review your notes as you plan your next lesson. Doing this will remind you to re-teach the topic in the following class. If you teach several sections of the same class, your notes will help you to adapt your lesson in order to provide necessary support to your other students.

Answer Key

Comprehension 4

1. They bring excitement, development and attention to a region.
2. There are environmental and economic costs.
3. over U.S. $50 billion
4. Port Olímpic is a tourist destination. The Beijing Water Cube is a popular water park.
5. design the facilities for long-term use

Formative Assessment

Can students

- read about abandoned Olympic sites and how they can be re-used?

  Ask *What is an example of a positive re-use for an Olympic site?*

- identify and use new words from the reading?

  Ask students to use *cost, development, maintain* and *venue* to describe what happens to an Olympic site after the games.

- identify the author's purpose and use it to better understand the reading?

  Ask *Why did the author write* Game Over?

Workbook For additional practice, assign Workbook pages 38–39.

Online Workbook Reading

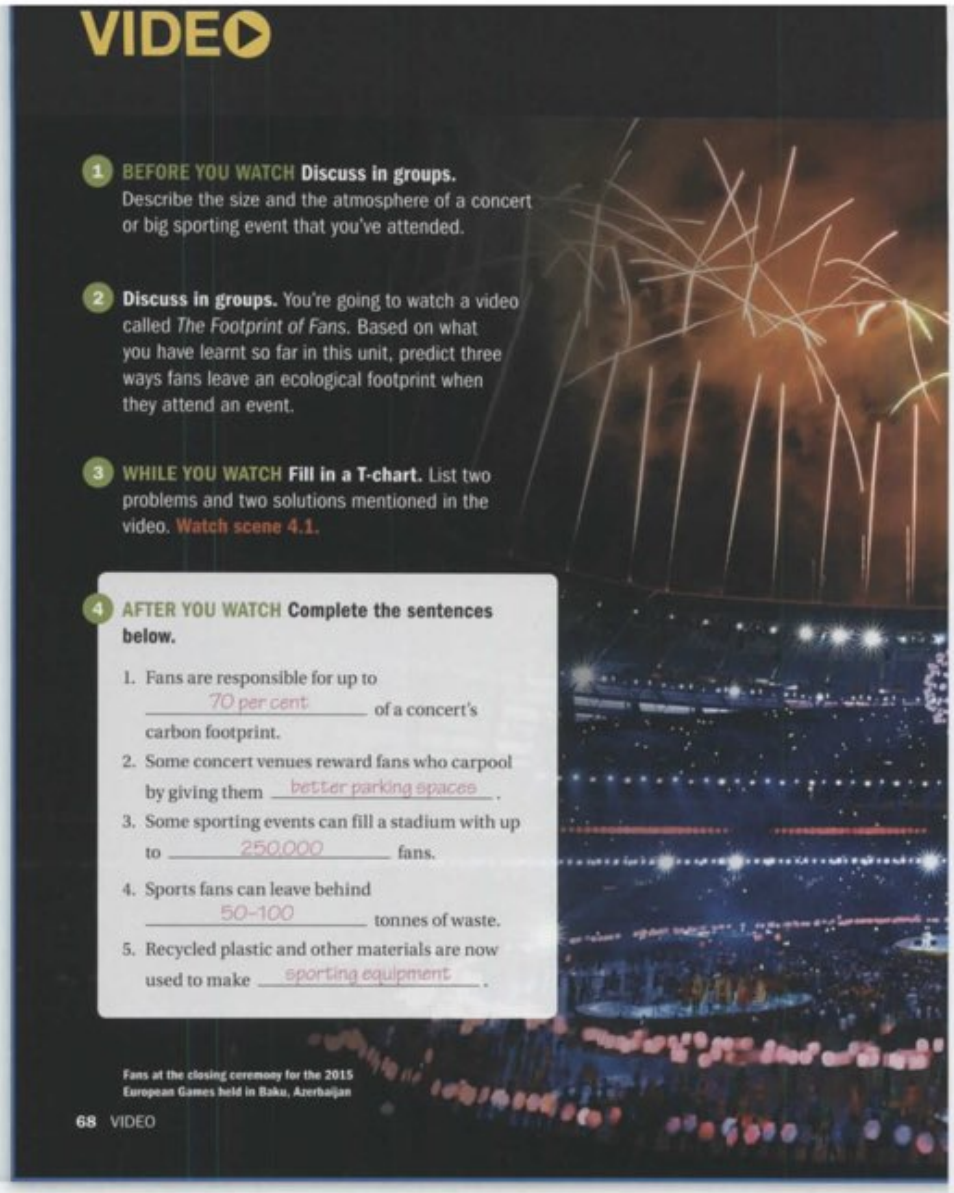
VIDEO

Objectives
Students will
- discuss the footprint of fans and how to reduce it.
- apply the message of the video to their personal lives.

Academic Language *predict, summarise, survey*

Content Vocabulary *carpool, marquee, reward*

Resources Video scene 4.1 (DVD/Website/CPT); Online Workbook; Graphic Organisers: T-chart (Teacher's Resource CD-ROM/Website); CPT: Video



Before You Watch 1 2

- Tell students to revisit pages 58–59 and study the photo. Say *We've already mentioned that these fans are at a football game. How many fans do you think attended this World Cup game?* Listen to students' guesses and then point out that the World Cup has an average attendance of 50,000 fans per game. Then ask *What other events draw large crowds like this?* Guide students to include *concerts* in their answers.
- 1 Tell students to open their books at pages 68–69. Ask a volunteer to read the instructions for Activity 1. If more than one student attended the same event, ask them to discuss that event in a group.
- 2 Read the instructions aloud. Say *Think of the causes of our footprint that we've already discussed. Which of them apply to concerts? Sporting events?* Invite several students to share their ideas with the class.

While You Watch 3

- 3 Give students a copy of the T-chart graphic organiser and tell them to label the columns *problem* and *solution*. Then say *You're going to learn about the environmental footprint that music and sports fans create by attending events. This footprint is the main problem, but we're going to look at problems that contribute to it.* Model completing the chart. Begin playing **Video scene 4.1** and pause it at 00:35. Ask *What's the problem?* (pollution caused by cars) Then continue playing the video and pause again at 00:47 and ask *What's the solution?* (offer rewards to people who carpool) Continue playing the video and tell students to fill in an additional two problems and two solutions.



5 **Work in pairs.** Tick the ways the video suggests that we can reduce our fan footprint.

- ☐ only watch games on TV
- ☑ carpool to concerts
- ☐ buy recycled sporting equipment
- ☐ pay less money for tickets
- ☑ recycle water bottles
- ☐ go to fewer concerts and sporting events

6 **Discuss in groups.** Answer the questions you see at the end of the video: *What else are you a fan of? How does it impact the environment? How can you take action to become an eco-friendly fan?*

7 **YOU DECIDE** **Choose an activity.**

1. **Work independently.** Research a concert or sporting event. How could the organisers have made the event greener? Write a letter to the organisers presenting at least three ideas.
2. **Work in pairs.** Survey your classmates to find out how many attend big events such as concerts or sporting events. Create five questions about transport, rubbish, energy use and recycling at these events. Summarise and report your findings.
3. **Work in groups.** Make a short presentation to your local politicians suggesting how to reduce the carbon footprint of big events in your city.

BE THE EXPERT

Teaching Tip

Strategies that students have learnt for reading and listening can also be helpful to them as they engage with video content. Encourage students to make predictions and use context to guess the meaning of unfamiliar words before viewing. Model note-taking as a strategy during viewing. And explain that students can use strategies such as identifying the main idea and details or summarising as post-viewing strategies.

Formative Assessment

Can students

- discuss the footprint of fans and how to reduce it?

  Ask *What are two ways music fans impact the environment when they attend concerts? What are solutions to these problems?*

- apply the message of the video to their personal lives?

  Ask *How will you change your behaviour at the next concert or sporting event that you attend?*

Online Workbook Video

After You Watch 4 5 6 7

- **4** Students may do this activity independently or in pairs. After they complete their sentences, play the video again and tell them to check their work.
- **5** Tell students to look at all of the answer options before marking their responses. Point out that some of the options may result in a lower footprint, but that they are only to mark the suggestions mentioned in the video. Check their responses.
- **6** Read the instructions aloud and ask *What else are you a fan of?* Write students' responses on the board. Then group students according to these interests. You may want to extend the activity by asking students to write their group's suggestions for being eco-friendly fans on a poster to display in class.
- **7** YOU DECIDE Ask students to choose a project. Gather students who choose to write the letter into a small group. Review letter-writing conventions with them before they begin their letters.
- If students choose to conduct the survey, they may also consider interviewing friends and family for additional input. Encourage students to create a graph to show their survey results.
- If students choose to make the presentation, they may do so as a role play. One student in the group can play the role of the mayor and the others present their ideas to him/her. The mayor asks questions and responds to suggestions.

GRAMMAR 2

Objective
Students will
- correctly use gerunds and infinitives after verbs.

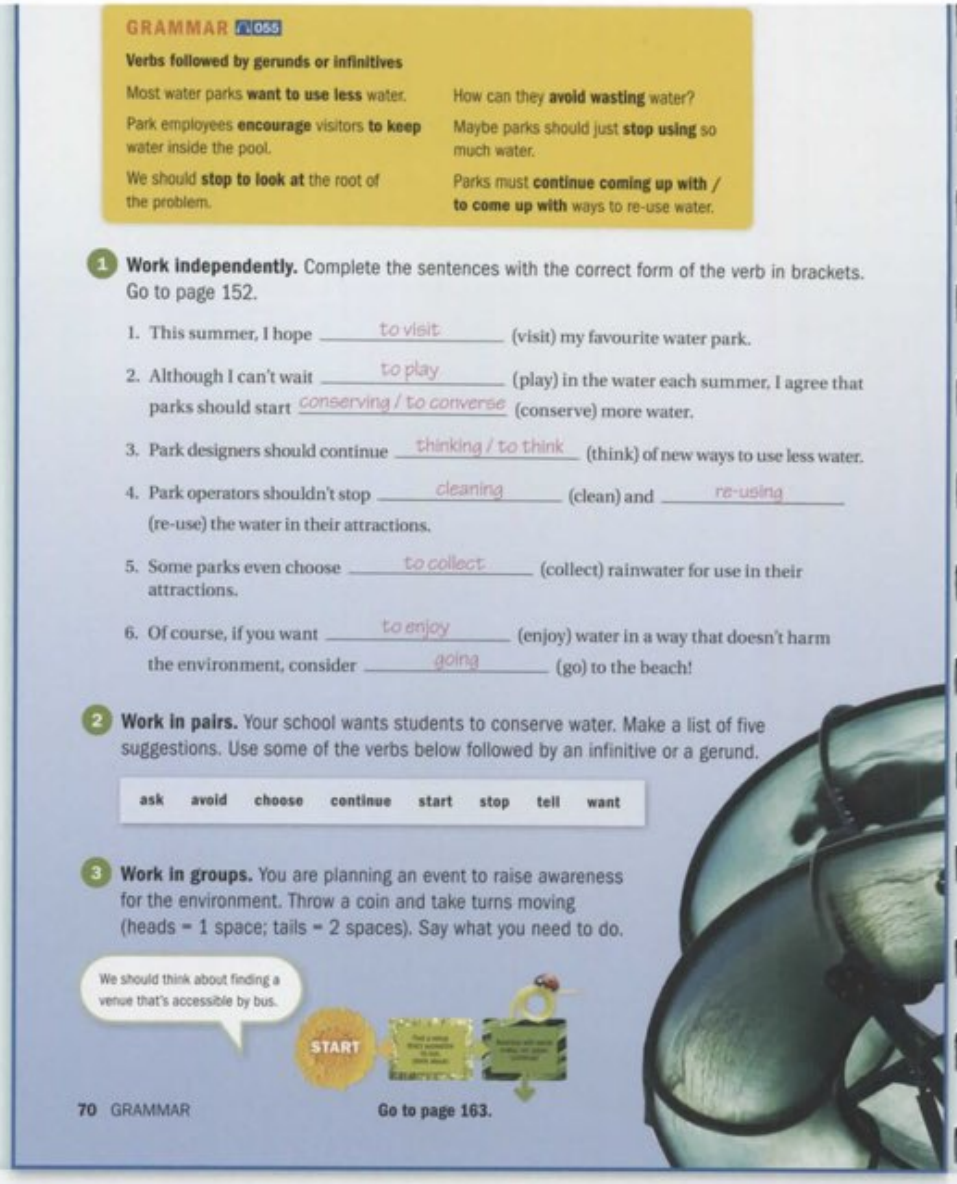
Grammar Verbs followed by gerunds or infinitives

Academic Language *gerund, infinitive*

Content Vocabulary *advertise, container, operator*

Resources Online Workbook/Workbook pages 40–41; Worksheet 4.4.5 (Teacher's Resource CD-ROM/ Website); Track 055 (Audio CD/ Website/CPT); CPT: Grammar 2

Materials coins for the board game, pieces of card



GRAMMAR 055

Verbs followed by gerunds or infinitives

Most water parks **want to use less** water.

Park employees **encourage** visitors **to keep** water inside the pool.

We should **stop to look at** the root of the problem.

How can they **avoid wasting** water?

Maybe parks should just **stop using** so much water.

Parks must **continue coming up with / to come up with** ways to re-use water.

1 **Work independently.** Complete the sentences with the correct form of the verb in brackets. Go to page 152.

1. This summer, I hope to visit (visit) my favourite water park.
2. Although I can't wait to play (play) in the water each summer, I agree that parks should start conserving / to conserve (conserve) more water.
3. Park designers should continue thinking / to think (think) of new ways to use less water.
4. Park operators shouldn't stop cleaning (clean) and re-using (re-use) the water in their attractions.
5. Some parks even choose to collect (collect) rainwater for use in their attractions.
6. Of course, if you want to enjoy (enjoy) water in a way that doesn't harm the environment, consider going (go) to the beach!

2 **Work in pairs.** Your school wants students to conserve water. Make a list of five suggestions. Use some of the verbs below followed by an infinitive or a gerund.

ask avoid choose continue start stop tell want

3 **Work in groups.** You are planning an event to raise awareness for the environment. Throw a coin and take turns moving (heads = 1 space; tails = 2 spaces). Say what you need to do.

We should think about finding a venue that's accessible by bus.

START

70 GRAMMAR

Go to page 163.

Warm Up

- **Pre-teach** Say *In this lesson, we're learning when to use different forms of verbs or action words.* Write a verb on the board: *to harm*. Then ask *What is the -ing form of this verb?* (harming) Write *harming* on the board. Say *Today, we're going to learn when to use the infinitive* (point to *to harm*) *and when to use the gerund* (point to *harming*).
- Say *Listen for infinitives and gerunds in the following sentences. Write them down.* Again, point to the correct form on the board as you say each word. Then say *I will stop wasting water. I want to re-use it. I'll consider collecting rainwater.*
- Ask *What infinitives did you hear?* (to re-use) *What gerunds did you hear?* (wasting, collecting) *What other verbs did you hear?* (stop, want, consider)

Present

- Tell students to open their books at page 70. Direct attention to the yellow grammar box. Say *We often use more than one verb to express an idea. We use verbs like* have, can, should *or* do *before verbs. We also use verbs that give additional meaning, such as* stop, want, think about *and* begin. Write these four verbs on the board, point to them and say *After verbs such as these, we must decide if the second verb takes the infinitive or the gerund form.*
- Play **Track 055** and tell students to listen. Then say *We see that some verbs take gerunds, while other verbs take infinitives. Turn to page 152 of your book.* Pause to allow students time to get to the correct page. Say *This list shows us when to use a gerund and when to use an infinitive.*

Practise 1 2

- 1 Tell students to underline the first verb in each sentence. Challenge students to see how many answers they can complete before using the list on page 152. Tell students to check their work in pairs.
- 2 Before students begin, tell them to look up each of the verbs from the box in the list on page 152 and mark an *i* next to each verb that requires an infinitive, a *g* next to each verb that requires a gerund and *i/g* next to verbs that could use either.
- **Give examples** Say *Let's think about where we use water in the school. For example, we use it to wash our hands. If we want students to use less water, we might say that they can wash their hands more quickly. Let's use the word* ask. *Does it require an infinitive or a gerund?* (an infinitive) *Right, it takes the infinitive.* Write and say *Ask students to wash their hands quickly.* Underline *ask* and *to wash*. Then tell students to complete the activity in pairs.

Apply 3

- 3 Tell students to cut out the board game on page 163. Give each group a coin to use for moving. Point out that students should make sentences using the verb in brackets as the main verb and the verb in the sentence in either the gerund or infinitive form. If necessary, model forming a sentence before students begin.

Extend

- Tell students to create a matching game in pairs. Give each student five cards and tell them to cut them in half to create ten small cards. One student should write five verbs in the infinitive form and five in the gerund form (one on each card). The other student should write four verbs that require the infinitive, four that require the gerund and two that could take either (again, one per card).
- Tell students to mix both sets of cards and place them face-down on the desk. Students should take turns selecting two cards at a time to match a verb with the form it takes. When they make a match, tell them to form a sentence using the verbs.
- Hand out **Worksheet 4.4.5** to provide additional practice with gerunds and infinitives.

Consolidate

- Write the following verbs on the board:

consider	plan	think about	want to

- Say *Tell a partner about your weekend plans. Use all of the verbs on the board in your descriptions.* Give students several minutes to discuss their plans in pairs. Then discuss them as a class.

BE THE EXPERT

Grammar in Depth

In two-verb constructions, the second verb may take the gerund or infinitive form. Some verbs require the infinitive, some require the gerund and still others can take either form. The *to*-infinitive is the verb form that begins with *to*, such as *to produce*. The gerund form ends in *-ing* and functions as a noun, such as *conserving*. In general, a verb is followed by the infinitive to refer to an action that hasn't happened yet. For example: *I want to go to a water park (but I haven't gone yet.)* A verb is often followed by a gerund to refer to something that may have happened. For example: *I avoid going to water parks (because I've already gone to one and didn't like it.)*

For some verbs that can be followed either by an infinitive or a gerund, the meaning is the same, such as in the following example: *I like to go to water parks. / I like going to water parks.* Other times, the meaning can change with the verb form: *He stopped collecting water bottles. / He stopped to collect water bottles.*

Formative Assessment

Can students

- correctly use gerunds and infinitives after verbs?

Ask students to complete the following sentences with a gerund or an infinitive:

We should avoid _____.

I want _____.

Let's continue _____.

Workbook For additional practice, assign Workbook pages 40–41.

Online Workbook Grammar 2

WRITING

Objectives
Students will
- identify elements of a problem and solution essay.
- use expressions that connect ideas.
- analyse a model problem and solution essay.
- write an essay about a fun activity that may be harmful to the environment.

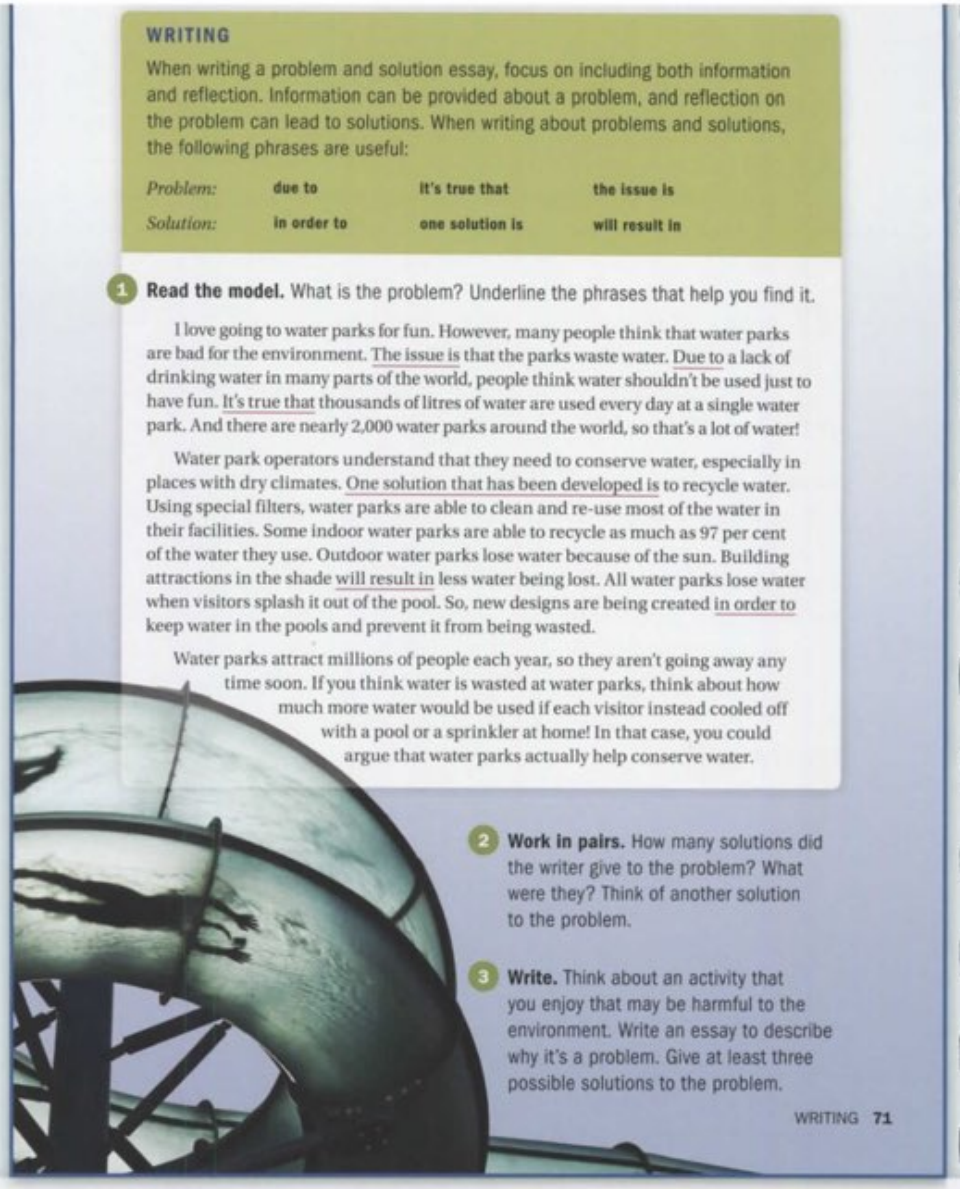
Writing Problem and solution essay

Academic Language *problem, reflection, solution*

Content Vocabulary *cool off, filter, issue, operator, shade, splash, sprinkler*

Resources Online Workbook/Workbook page 42; Process Writing Worksheets 1–5; Genre Writing Worksheet: Problem/Solution Essay (Teacher's Resource CD-ROM/Website); CPT: Writing

Materials sticky notes



WRITING

When writing a problem and solution essay, focus on including both information and reflection. Information can be provided about a problem, and reflection on the problem can lead to solutions. When writing about problems and solutions, the following phrases are useful:

Problem:	**due to**	**it's true that**	**the issue is**
Solution:	**in order to**	**one solution is**	**will result in**

1 **Read the model.** What is the problem? Underline the phrases that help you find it.

I love going to water parks for fun. However, many people think that water parks are bad for the environment. The issue is that the parks waste water. Due to a lack of drinking water in many parts of the world, people think water shouldn't be used just to have fun. It's true that thousands of litres of water are used every day at a single water park. And there are nearly 2,000 water parks around the world, so that's a lot of water!

Water park operators understand that they need to conserve water, especially in places with dry climates. One solution that has been developed is to recycle water. Using special filters, water parks are able to clean and re-use most of the water in their facilities. Some indoor water parks are able to recycle as much as 97 per cent of the water they use. Outdoor water parks lose water because of the sun. Building attractions in the shade will result in less water being lost. All water parks lose water when visitors splash it out of the pool. So, new designs are being created in order to keep water in the pools and prevent it from being wasted.

Water parks attract millions of people each year, so they aren't going away any time soon. If you think water is wasted at water parks, think about how much more water would be used if each visitor instead cooled off with a pool or a sprinkler at home! In that case, you could argue that water parks actually help conserve water.

2 **Work in pairs.** How many solutions did the writer give to the problem? What were they? Think of another solution to the problem.

3 **Write.** Think about an activity that you enjoy that may be harmful to the environment. Write an essay to describe why it's a problem. Give at least three possible solutions to the problem.

WRITING 71

Warm Up

- **Build background** Say *In this lesson, we're going to learn to write a problem and solution essay. Let's first think about problems and possible solutions.* Ask several students to identify an academic problem they know about. Then discuss solutions to each problem as a class.
- Give each student a sticky note. Tell students to sit in pairs. Say *One of you will write an environmental problem on your note.* Pause to allow students to do this. Then say *Now discuss your problem with your partner. Think of a good solution to the problem and write it on another sticky note.*
- Once each pair has a problem and a solution, invite them to come to the board. Students with problems should post their sticky notes in a group on the left-hand side of the board. Students with solutions should post on the right-hand side.
- Invite students to come to the board one at a time and match a problem with a solution. Point out that there may be more than one possible answer. Say *You've identified problems and solutions. Now, we're going to look at how to identify problems and their solutions in an essay.*

Present

- Tell students to open their books at page 71. Direct them to the green box at the top of the page. Read the information aloud and tell students to follow along. Say *In the Warm Up activity, you identified a problem. Then you discussed possible solutions to the problem. In doing this, you reflected on the problem. When we talk about or think about a problem, we're reflecting on it. This helps us come up with a solution.*

- **Model** Say *Let's look at how to use phrases that are helpful for introducing problems and solutions.* Review the phrases for indicating problems and solutions with students. Write the following example on the board:

> Car racing is harmful for the environment due to the amount of fuel used in a race.

- Read the sentence aloud and underline the phrase *due to*. Say *In this sentence, due to introduces information on why car racing is a problem.* Tell students to scan the model for the phrase *due to* and identify the problem it introduces. (lack of drinking water) Repeat this instruction with several other phrases.

Read the Model 1 2

- 1 Say *Now we are going to read a model of a problem and solution essay. Look at the photo below. What do you think the essay is going to be about?* (water parks)

- Read the instructions aloud. Say *Remember to think about the problem as you listen and read.* Invite a student volunteer to read the essay aloud. Then ask *What is the problem being presented?* (Water parks harm the environment by wasting water.) Tell students to scan the essay again and underline the phrases that introduce problems and solutions.

- 2 Say *Read the essay again silently. This time, focus on the solutions.* Allow students several minutes to re-read the essay. Encourage students to write a small number next to each solution. For example, they can write *1* next to the first solution mentioned. Ask *How many solutions are mentioned in the essay?* (three) *What are they?* (recycling water, building attractions in the shade, designing pools so water doesn't splash out) Tell students to work in pairs to discuss another possible solution to the problem. Invite students to share their ideas with the class.

- **Worksheet** If your students need a reminder of the elements of the problem and solution essay, you may want to hand out the **Problem and Solution Genre Writing Worksheet** and review it together.

BE THE EXPERT

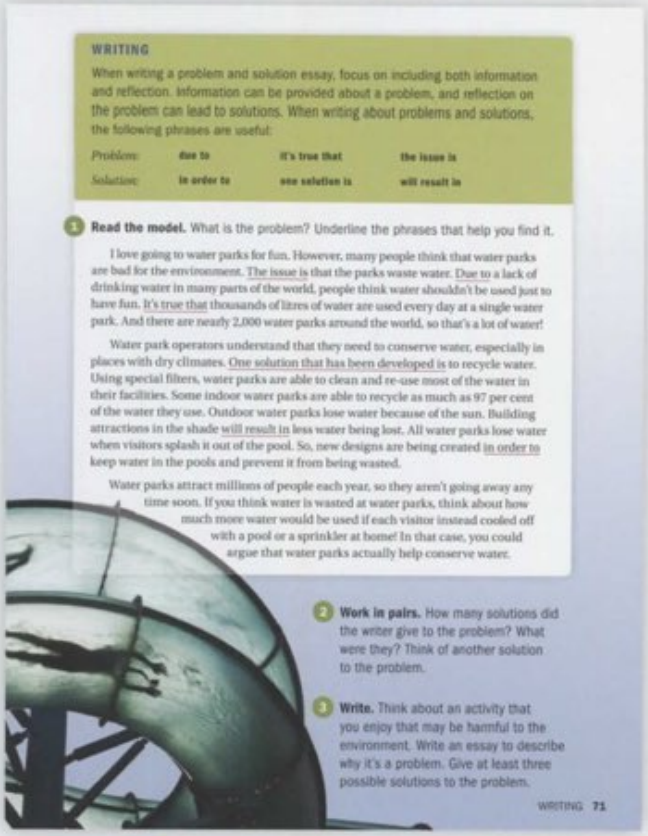
Writing Support

Usage Point out to students that when they're writing a problem and solution essay, they will almost always use the present tense to describe the problem. Solutions may also be presented in the present tense, but it's likely that modal verbs such as *can, will* and *should* will be used when discussing solutions.

Remind students also to keep the same voice throughout the essay. In other words, if they use *we* to describe the problem (e.g. *We waste too much water*), they should use the same *we* to explain the solution (e.g. *We should turn off the water while we brush our teeth*). Often, students may use the third person to talk about the problem and the second person to describe the solution. Remind them to be consistent.

Workbook For scaffolded Writing support, assign Workbook page 42.

Online Workbook Writing



WRITING

When writing a problem and solution essay, focus on including both information and reflection. Information can be provided about a problem, and reflection on the problem can lead to solutions. When writing about problems and solutions, the following phrases are useful:

Problem:	due to	it's true that	the issue is
Solution:	in order to	one solution is	will result in

1 **Read the model.** What is the problem? Underline the phrases that help you find it.

I love going to water parks for fun. However, many people think that water parks are bad for the environment. The issue is that the parks waste water. Due to a lack of drinking water in many parts of the world, people think water shouldn't be used just to have fun. It's true that thousands of litres of water are used every day at a single water park. And there are nearly 2,000 water parks around the world, so that's a lot of water!

Water park operators understand that they need to conserve water, especially in places with dry climates. One solution that has been developed is to recycle water. Using special filters, water parks are able to clean and re-use most of the water in their facilities. Some indoor water parks are able to recycle as much as 97 per cent of the water they use. Outdoor water parks lose water because of the sun. Building attractions in the shade will result in less water being lost. All water parks lose water when visitors splash it out of the pool. So, new designs are being created in order to keep water in the pools and prevent it from being wasted.

Water parks attract millions of people each year, so they aren't going away any time soon. If you think water is wasted at water parks, think about how much more water would be used if each visitor instead cooled off with a pool or a sprinkler at home! In that case, you could argue that water parks actually help conserve water.

2 **Work in pairs.** How many solutions did the writer give to the problem? What were they? Think of another solution to the problem.

3 **Write.** Think about an activity that you enjoy that may be harmful to the environment. Write an essay to describe why it's a problem. Give at least three possible solutions to the problem.

WRITING 71

Plan 3

- 3 Say *Now you're going to choose your own topic to write about. Before you decide on a problem make sure that you choose something that you can think of at least three solutions for.* Point out that students should research their topics online. They can choose a pastime mentioned in the unit or select a different topic. Say *You have to include information, such as facts and statistics, about the problem. Then reflect on it. Include solutions that you think are most effective. Briefly explain how each will help.* Students can find solutions online or describe their own ideas for solutions.

- **Worksheets** If your students need a reminder of any of the steps of process writing, hand out **Process Writing Worksheets 1–5** and review together.

- **Workbook** Refer students to Workbook page 42 to help them organise and plan their writing.

Write

- After students have finished their pre-writing, tell them to work on their first drafts. If you don't have enough time for students to complete the first draft in class, assign it as homework.

Revise

- After students finish their first drafts, tell them to review their writing for clarity and organisation. Tell students to consider the following: *Is it easy to identify the problem? Are there at least three solutions presented? Do these solutions seem possible, showing reflection on the problem? Are the ideas connected in a logical way? What needs more work?*

Edit and Proofread

- Remind students to consider elements of style, such as sentence variety, parallelism and word choice. Then remind them to proofread for mistakes in grammar, punctuation, capitalisation and spelling.

Publish

- Publishing includes handing in pieces of writing to the teacher, sharing work with classmates, adding pieces to a class book, displaying pieces on a classroom wall or in a hallway and posting on the Internet.

Writing Assessment

Use these guidelines to assess students' writing. You can add other aspects of their writing you'd like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

	1	2	3	4
Writing Ideas are clear and well organised, and the problem and solutions are presented in a logical way.				
Grammar Student uses verbs followed by gerunds and infinitives.				
Vocabulary Student uses a variety of word choices, including words used in this unit.				



MISSION

Objectives
Students will
- talk about their own environmental awareness.
- talk about ways to educate others on protecting the environment while having fun.

Resources Video scene 4.2 (DVD/Website/CPT); Worksheet 4.4.6 (Teacher's Resource CD-ROM/Website); Online Workbook: Meet the Explorer; CPT: Mission

BE THE EXPERT

Teaching Tip

Students may have a difficult time critically analysing their own actions. Model critical thinking in a think-aloud. For example, mention an activity, such as surfing. Then model asking information questions about all aspects of this topic: *What do I use to go surfing? Who makes these items? Where are they made? How are they transported?*

Online Workbook Meet the Explorer

Mission

- Read aloud the mission *Reduce your Footprint.* Say *We've learnt that certain activities that we do for fun can harm the environment. That doesn't mean that we can't have fun. We must just think of ways to do these activities responsibly.* Invite a student to read Jack Johnson's quote. Say *Jack tells us that our actions and our voice and our choices all have an impact.* Ask students to give examples of a time when their actions created change (such as picking up litter). Then say *Give examples of when you've made a choice that impacted the environment in a positive way.* Ask several students to explain their choices. Then repeat this by asking students to admit to choices that have negatively impacted the environment. After each student shares, follow up with the question *How can you choose differently the next time?*

- **Activity 1** Say *Now let's watch a video about Jack Johnson.* Play **Video scene 4.2** and tell students to focus on Jack's dedication to the environment.

- **Activity 2** Put students into pairs and tell them to consider the question in every aspect of their lives: at home, at school, with friends, with clubs or sports teams and in public. Tell them to consider at least one way to reduce their footprint in each situation.

- **Activity 3** Students can discuss this question in pairs or small groups. Then ask them to talk about how they might approach the topic with different family members, teachers, strangers and friends. Ask *How does the advice change from one person to the next? Should it be the same for everyone? Why or why not?*

- **Worksheet** Hand out **Worksheet 4.4.6**. Explain that students will use the worksheet to further discuss how to have fun responsibly.

PROJECT

Objective
Students will
- choose and complete a project relating to reducing their footprints.

Academic Language *brainstorm, develop*

Content Vocabulary *script, upcoming*

Resources Assessment: Unit 4 Quiz and Units 1–4 Mastery Test; Workbook pages 43 and 93; Worksheet 4.4.7 (Teacher's Resource CD-ROM/ Website); CPT: Make an Impact and Review Games

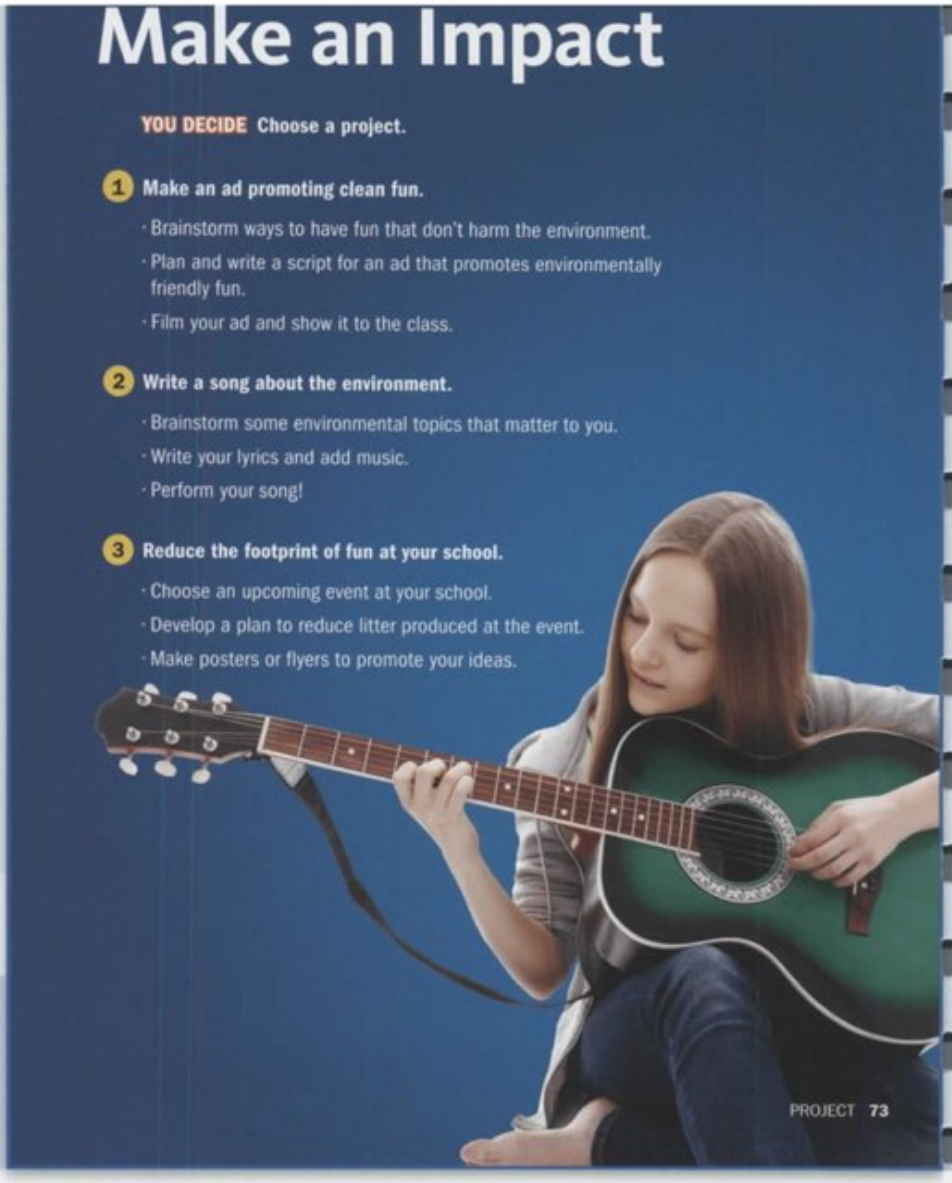
Materials audio equipment, poster board, video recording device

Assessment Go to page 257.

Unit Review Assign Worksheet 4.4.7

Workbook Assign pages 43 and 93.

Online Workbook Now I can



Prepare

- YOU DECIDE Ask students to choose a project.
- **Activity 1** Remind students to review the work they've done so far in this unit and to pull ideas from their work to use in their projects. Ask students to share their scripts with you before they record it so that you can check for errors. Remind students to be friendly but persuasive in their ads as they film. If video equipment is not available, students can make a radio ad.
- **Activity 2** If students without much musical talent want to choose this project, point out that they can take a familiar popular song and rewrite the words to change the message. Remind students who choose to write their own songs to create verses and a refrain. Each verse can describe a different environmental issue and the refrain can be a message of change.
- **Activity 3** Provide students with a calendar of events at your school and ask them to discuss the impact each event will have. Then tell them to choose an event in which they think they can make a difference. Encourage students to contact event organisers in order to discuss realistic ways for people to reduce their footprint. Students can use the information from the discussion to create their plans.

Share

- Schedule time for groups to present their final projects to the class. Bring in a TV or computer projector to show students' videos and audio equipment for students' songs.
- **Modify** To provide structure, make a list of topics for students to choose from for Activities 1 and 2. Ideas could include recycling, using less plastic or eco-friendly forms of transportation. For Activity 3, choose the event and provide details for students.

STUDENT'S BOOK AUDIO SCRIPT

Track 043 1 **Listen and read.** See Student's Book pages 60–61.

Track 044 2 LEARN NEW WORDS **accessible** / Many parks are only accessible by car. **amusement** / Amusement parks have rides, shows and games. **attraction** / Big cities have many tourist attractions. **compost** / When you compost, you re-use food waste as fertiliser for plants. **consume** / A lot of food is consumed at sporting events. **economic** / Going green can have a positive economic impact on a company. **enjoyable** / An outdoor concert on a warm evening can be very enjoyable. **excessive** / After the park closed, there was an excessive amount of litter on the ground. **facility** / The park had picnic facilities near the fountain. **industry** / People in the entertainment industry should be role models for sustainability. **litter** / After the concert, workers cleaned up litter in the stadium. **movement** / Many amusement parks are part of the green movement. **participate** / Are you participating in the beach clean-up this Saturday? **result** / Air pollution can be the result of a big public event. **sensitive** / We all need to be sensitive to the needs of our planet.

Track 045 5 Surfer and singer Jack Johnson is taking action to educate his fans about sustainability. But Jack isn't the only one in the music industry being proactive about environmental causes. The Bonnaroo Music and Arts festival is more than just a concert. Big names in music join with dozens of non-profit-making environmental groups to raise ecological awareness among music fans. Classes and workshops teach about gardening, re-using and other sustainable lifestyle choices that can have benefits for the planet and everyone on it.

Track 046 5 LEARN NEW WORDS **benefit** / Being green can have environmental and economic benefits. **non-profit** / Making money is not the goal of non-profit-making organisations. **proactive** / Concert organisers are often proactive about preventing litter. **take action** / You can take action by re-using your things instead of throwing them out.

Track 047 SPEAKING STRATEGY See Student's Book page 63.

Track 048 1 **S1**: Hi, Liang. What are you up to?

S2: I'm going home to watch the big race on TV.

S1: Which big race is that?

S2: The Formula One Grand Prix.

S1: You like car racing? The cars burn so much fuel! Most people would agree that it's the worst sport for the environment, don't you think?

S2: Yes, but the sport is changing. You'd be surprised. As far as I know, the industry is really trying to go green. I heard that many of the cars run on biofuels now.

S1: Really? Well, I read that many racing cars still use regular fuel – and almost twenty-thousand litres of it in a single race!

S2: All I'm saying is that the sport is trying to change. Not only are cars more efficient, but also many racetracks are powered by solar panels. And most racing organisations plant trees to improve air quality. It's not all bad!

Track 049 GRAMMAR See Student's Book page 64.

Track 050 2 So you have been taught that some fun activities can harm the environment. But Jack Johnson is working towards his goal that the environment will not be impacted by his concerts. Water refill stations have been placed throughout his concert venues. Fans are being encouraged to bring their own reusable water bottles. And Jack's team works together with farms to be sure that sustainable food can be sold. Jack hopes that his message is coming through and that his fans will be transformed by their experience at his show.

Track 051 4 Recently, the worldwide demand for plastic has exploded. Plastic is all around us – our gadgets, dishes, furniture – almost everything is made of plastic these days! Plastic is convenient, but most of us never think about the damage caused by using too much plastic.

Jack says, 'Challenge yourself to reduce your plastic footprint'. Why should we do this? And how can we?

Litter from plastic products dirties our cities. Much of the plastic ends up in landfill, where it can last up to 500 years! But worse is that our oceans are being polluted by plastics. There are around 8 million tonnes of plastic waste in the world's oceans. Over 700 species of marine wildlife have been harmed by this pollution. Many animals mistake plastic for food. Over 100,000 marine animals die each year from eating plastic. Others might survive, but some of them end up on our plates. So, humans are also being harmed by plastic in the oceans.

To make a positive change, we can:

- Reduce the amount of plastic we use each day.
- Re-use by carrying our own water bottles and bags.
- Recycle any additional plastic we use.

Whether you're going to school, to the park or to a concert, think about your footprint.

Track 052 4 LEARN NEW WORDS **challenge** / Let's challenge ourselves to reduce our use of plastic products. **damage** / The over-use of plastic is causing damage to the environment. **demand** / The demand for bottled water is much higher than it was 50 years ago. **harm** / Litter in the ocean harms marine animals. **waste** / Plastic waste can stay in a landfill for 500 years.

Track 053 2 LEARN NEW WORDS **cost** / There are environmental and economic costs to hosting the Olympic Games. **development** / The Olympic Games brings development to a region. **maintain** / Workers maintain a building by keeping it in good condition. **venue** / Many large venues have been constructed for the Olympic Games.

Track 054 3 WHILE YOU READ See Student's Book pages 66–67.

Track 055 GRAMMAR See Student's Book page 70.

Track 056 1 **Express Yourself** See Student's Book pages 74–75.

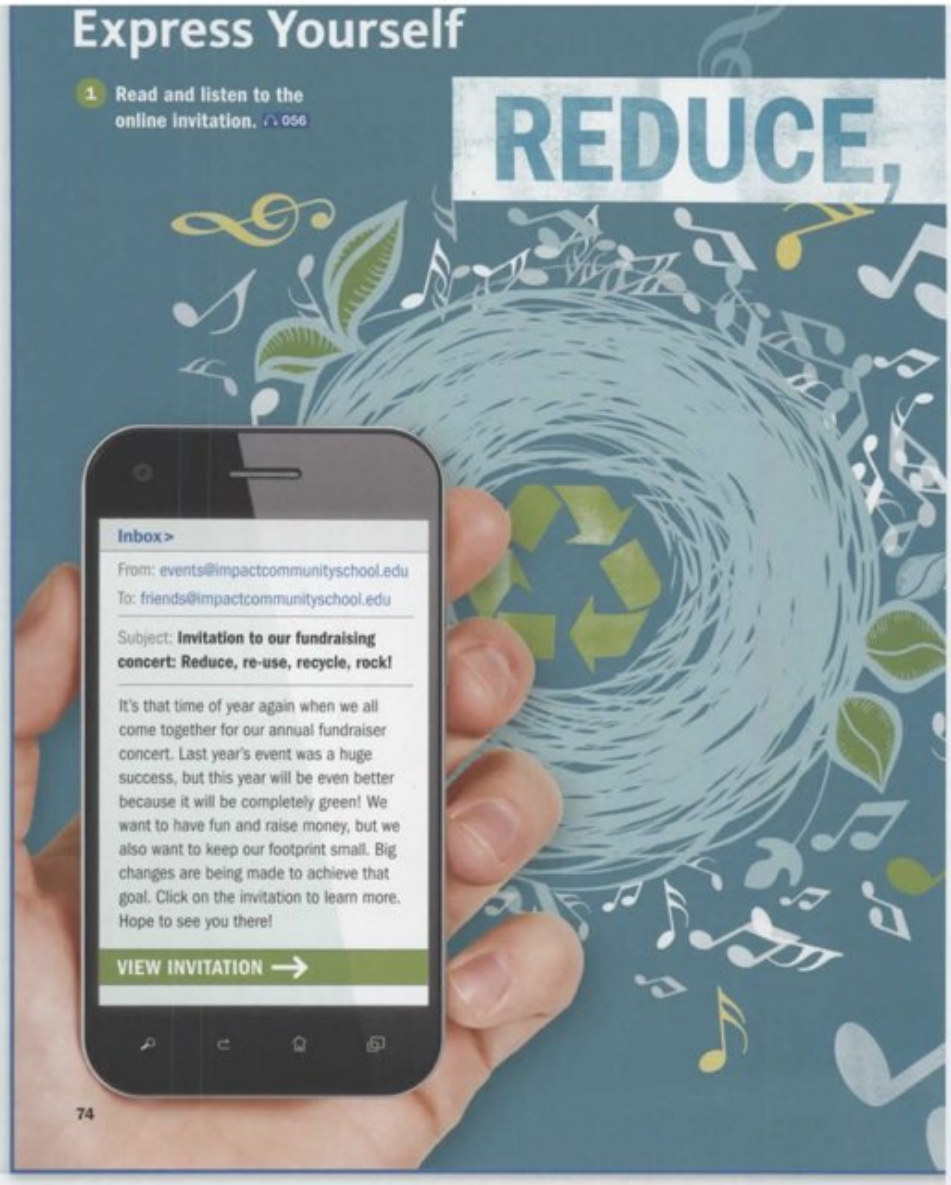
Express Yourself

Objectives
Students will
- identify elements and content of an invitation.
- connect ideas about enjoying food and having fun in a sustainable way.

Academic Language *invitation*

Content Vocabulary *forward, power, raise money, utensil*

Resources Workbook pages 44–45/ Online Workbook (Units 3–4 Review); Worksheet 4.4.8 (Teacher's Resource CD-ROM/Website); Track 056 (Audio CD/Website/CPT); CPT: Express Yourself Units 3–4



Present 1

- **Preview** Tell students to turn to pages 74–75. Say *Look at the image on the page. What is it?* (an invitation) *How is it being delivered?* (on the Internet) Then ask *Have you ever received an online invitation? What was it for? What type of information did it give?*

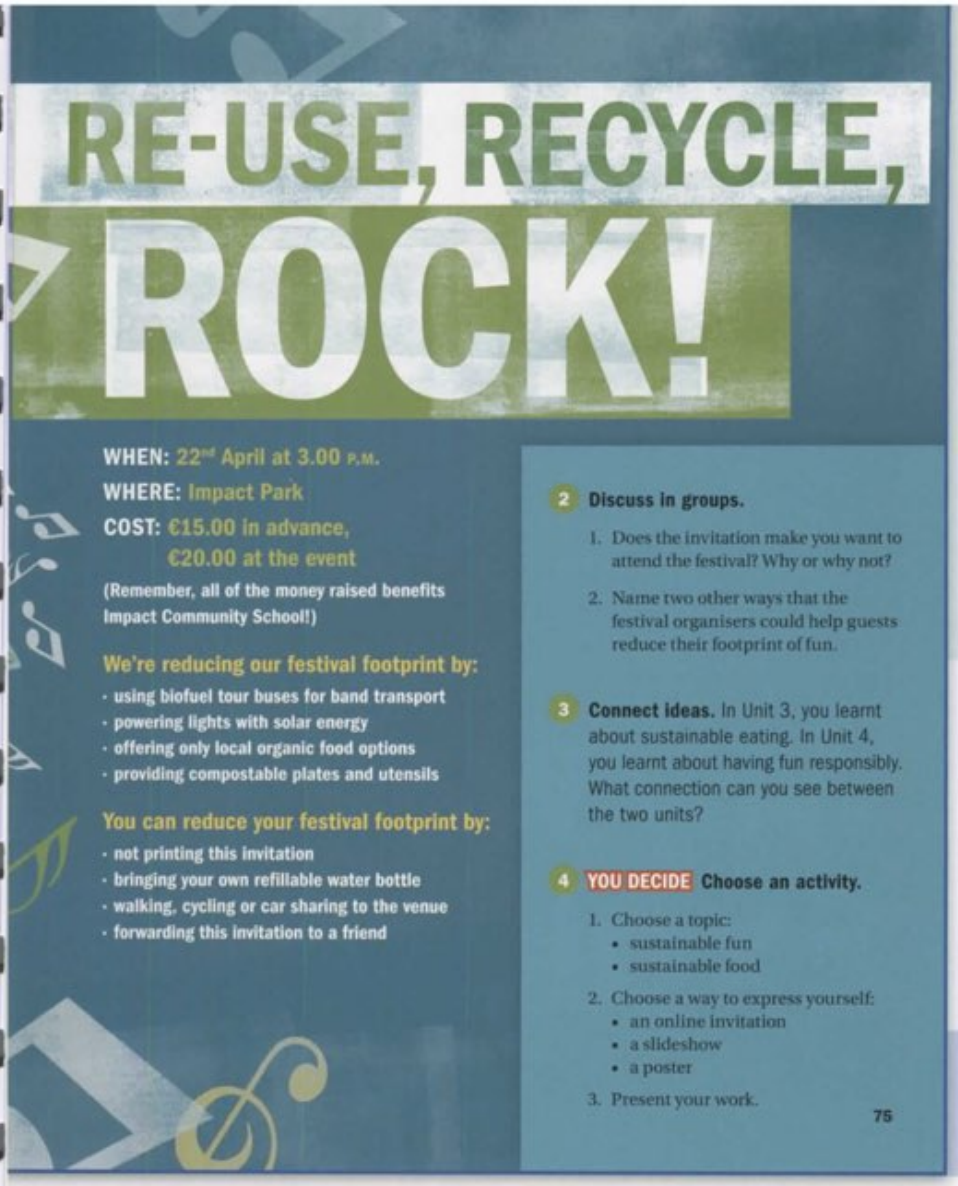
- 1 **Read together** Say *We're going to hear and read information about an event and an invitation to attend it.* Play **Track 056** and tell students to follow in their books. Pause after the introductory paragraph and ask questions such as: *Who is the invitation for?* (the school community) *What is the goal of the event?* (fundraising) *Who benefits from the event?* (the school) *Why is this year's event going to be better than last year's?* (because it will be green) Continue playing **Track 056**. At the end, call on a student to summarise the event's details.

Practise 2

- 2 **Discuss** Say *Re-read the invitation. Would you like to attend this festival? Why or why not?* Tell students to discuss the first question in small groups. Then invite groups to share their responses. Then ask *Does it matter to you if events you attend are green? What's more important – being green or having fun?* Discuss these questions as a class.

- Direct students' attention to the second item. Give them several minutes to brainstorm their ideas in groups. Then ask groups to share their suggestions with the class. List the different responses on the board and discuss how realistic each one would be to carry out. Then ask the class to determine the two best responses.

- To extend this activity, review how to politely make suggestions. Then tell students to write their recommendations in a formal e-mail.



BE THE EXPERT

Our World in Context

The event mentioned in the invitation is being held on 22nd April, Earth Day. Each year, events are held worldwide on this day to raise awareness for environmental causes. The first Earth Day was on 22nd April, 1970. Earth Day became a global movement in the 1990s. Today, hundreds of millions of people from over 180 countries participate.

Cumulative Review

Hand out Cumulative Review Worksheet 4.4.8.

Formative Assessment

Can students

- identify elements and content of an invitation?

  Ask students to list four key pieces of information to include in an invitation.

- connect ideas about enjoying food and having fun in a sustainable way?

  Ask *What are two ways that both food and fun can harm the environment?*

Workbook Assign pages 44–45.

Online Workbook Units 3–4 Review

Connect 3

- 3 **Critical thinking** Read the Activity 3 text aloud. As students discuss, walk around the room to check their understanding and the logic of their ideas.
- When time is up, ask *How can you make better food choices when you're having fun at a park, a concert or a sporting event?* Ask students to share their ideas with the class.

Prepare 4

- Review the instructions for Activity 4. You may want to assign this activity in advance so that students have time to work on it in class or at home.
- 4 YOU DECIDE Tell students to choose an activity. Remind students who choose the invitation that they should provide details about a real or imagined event.
- Encourage students who choose the slideshow to be creative. Slideshows might contain a narrative about sustainability. Or, they might provide a more general overview of the chosen topic, including statistics and facts.
- Tell students who design a poster about sustainability to make copies of it to be hung in the school. To extend the project, ask students to show their posters to peers and interview them to identify how the poster is changing students' attitudes and/or behaviours.

Share

- Set aside time for students to share their work with the class. Remind students to listen actively by focusing on the speaker or presenter. Tell students to write at least one question that they have for the presenter. Then allow several minutes for questions and answers.

In This Unit

Theme This unit looks at exploration and the reasons people explore.

Content Objectives
Students will
- identify explorers and the reasons that they explore.
- identify how technology is useful for exploration.
- identify and describe an historic flight.
- read about a gene associated with exploration.

Language Objectives
Students will
- talk about why it's important to explore.
- use new phrases to hesitate or buy time when answering questions.
- use narrative tenses to tell a story.
- use *the* correctly when talking about places.
- write an essay that compares and contrasts exploring in the field and exploring virtually.

Vocabulary
pages 78–79 *curious, drive, encounter, exciting, expert, high-tech, investigate, knowledge, look into, pioneer, purpose, remote, research*
page 80 *achievement, encourage, engage in, require*
page 83 *educate, globe, motion, route, set a record*
page 84 *associated, gene, motivate, trait*
Vocabulary Strategies Words with *en-* prefix; Use pronunciation

Speaking Strategy Hesitating or buying time when answering questions

Grammar
Grammar 1 Use narrative tenses to tell a story
Grammar 2 Use *the* correctly to talk about places

Reading *The Explorer Gene*
Reading Strategy Make a personal connection

Video Scene 5.1: *Why Is It Important to Explore?*; Scene 5.2: Meet Corey Jaskolski

Writing Compare and contrast essay

National Geographic Mission Learn by Doing

Project
- Expedition plan
- Explorer profile
- Exploration from home

Pronunciation Sounds of letter *x*

Pacing Guides 4.5.1, 4.5.2, 4.5.3

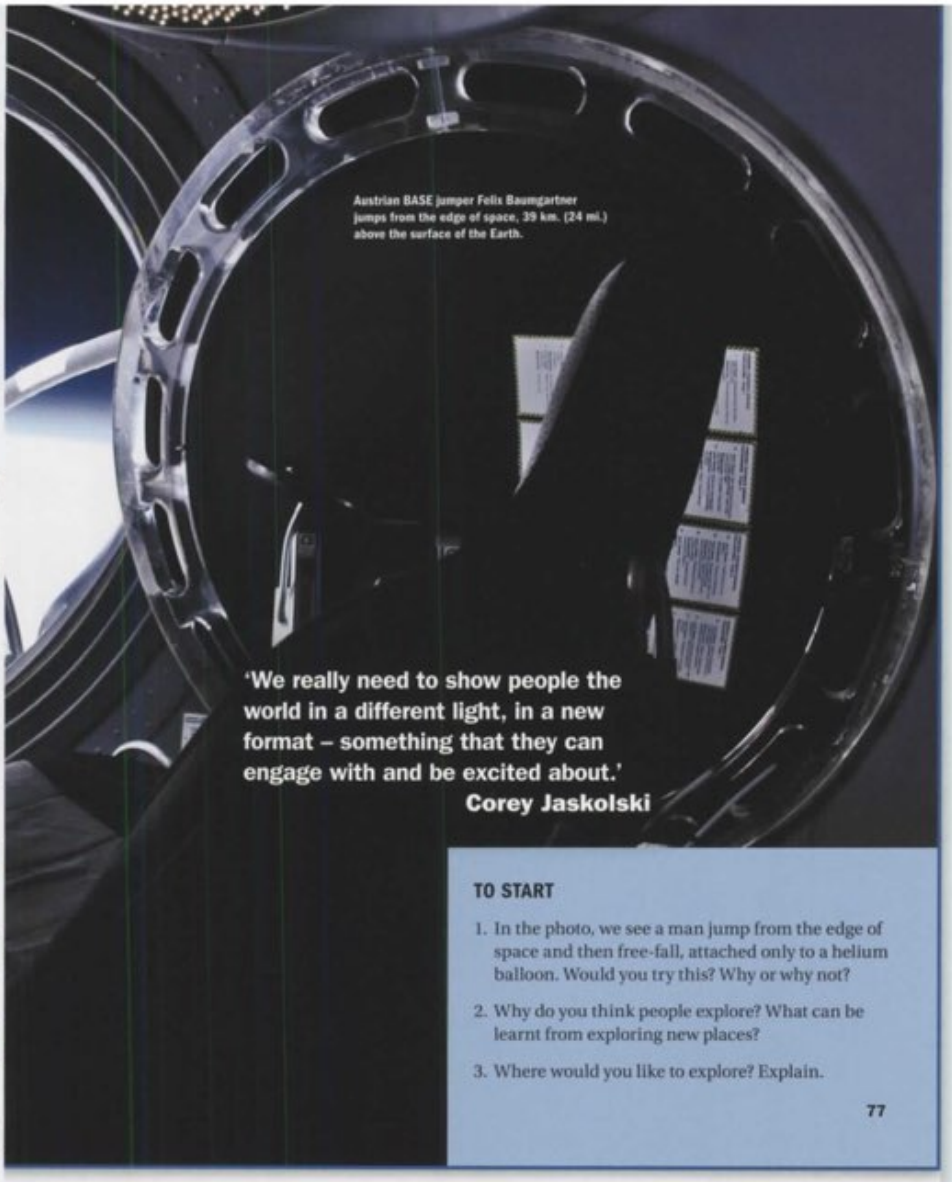


Introduce the Unit

- **Activate prior knowledge** Say *The theme of our next unit is exploring. You may not realise it, but we've already learnt about many different types of exploring. We learnt about Cory Richards, who explores extreme places. We've also learnt about Patrick Meier, who uses digital technology to explore crisis areas. And Barton Seaver explores the world through food. If you were a National Geographic Explorer, what would you want to explore?* Tell students to discuss this question in pairs. Then invite pairs to share their responses.

- Say *Open your books at pages 76 and 77.* Ask *What is the man in the photo doing?* (jumping out of a spacecraft) *Do you think he's an explorer? Why or why not?* Listen to several students' responses.

- Ask a student to read Corey Jaskolski's quote aloud. Say *Think of a time that you saw something new or different. What was it? How did it make you feel?* Invite several students to share their stories. Then ask *How can we see the world in a 'different light', as Corey mentions? What tools do you use to explore the world?* Students may respond that they use technology to explore the world.



Austrian BASE jumper Felix Baumgartner jumps from the edge of space, 39 km. (24 mi.) above the surface of the Earth.

'We really need to show people the world in a different light, in a new format – something that they can engage with and be excited about.'
Corey Jaskolski

TO START

1. In the photo, we see a man jump from the edge of space and then free-fall, attached only to a helium balloon. Would you try this? Why or why not?
2. Why do you think people explore? What can be learnt from exploring new places?
3. Where would you like to explore? Explain.

77

- Ask a student to read Question 1 on page 77 aloud. Tell students to discuss the question in pairs. Say *Put your hand up if you would be willing to try this jump.* Wait for students to put their hands up. Then ask several of those students *Why would you want to do this? What would you risk?* After that discussion, turn to students that didn't put their hands up and ask *Why wouldn't you do this?* Listen to several responses.
- Ask a student to read Question 2 aloud. Guide students to use examples from their own experiences in their discussions.
- Ask a different student to read Question 3 aloud. Then tell students to make a list of two or three places they'd like to explore and why. Remind students that their responses could include places in your region or more remote places.

Extend

- Hand out **Worksheet 4.5.1**. Put students into pairs. Explain that partners will be writing about and discussing exploration.

UNIT OPENER

Objectives
Students will
- describe and discuss a photo.
- discuss why and how people explore.

Content Vocabulary *format, free-fall, helium*

Resources Worksheet 4.5.1 (Teacher's Resource CD-ROM/Website); CPT: Unit Opener

BE THE EXPERT

About the Photo

The photo shows Felix Baumgartner, an Austrian skydiver, just before he performed an historic skydive – the highest in history – on 14th October, 2012. Baumgartner took a custom-built space capsule to the edge of space to make this 'space jump'. With a top speed of 1,343 kph. (834 mph.), the jump made Baumgartner the first person ever to break the speed of sound in a free fall. He continued to free-fall for four minutes before opening his parachute to land in the desert of New Mexico, United States. The entire journey back to Earth lasted only nine minutes and nine seconds.

Teaching Tip

When students get really excited about a topic, they tend to speak out in class. If you have a topic that you think will capture students' interest, plan ahead for strategies that will allow each student to share their ideas without interrupting others. For example, ask students who are interested in answering a question to put their hands up. Those students should signal their interest in speaking by standing their book upright or giving another sign. Tell students to put their hands down. Then, one by one, let each student talk for a certain amount of time. After each student speaks, tell him or her to put the book down. When students have a visual clue that others want to contribute, it will be easier for them to understand that they need to stop talking and give others a chance.

Related Words

skydive, capsule

VOCABULARY

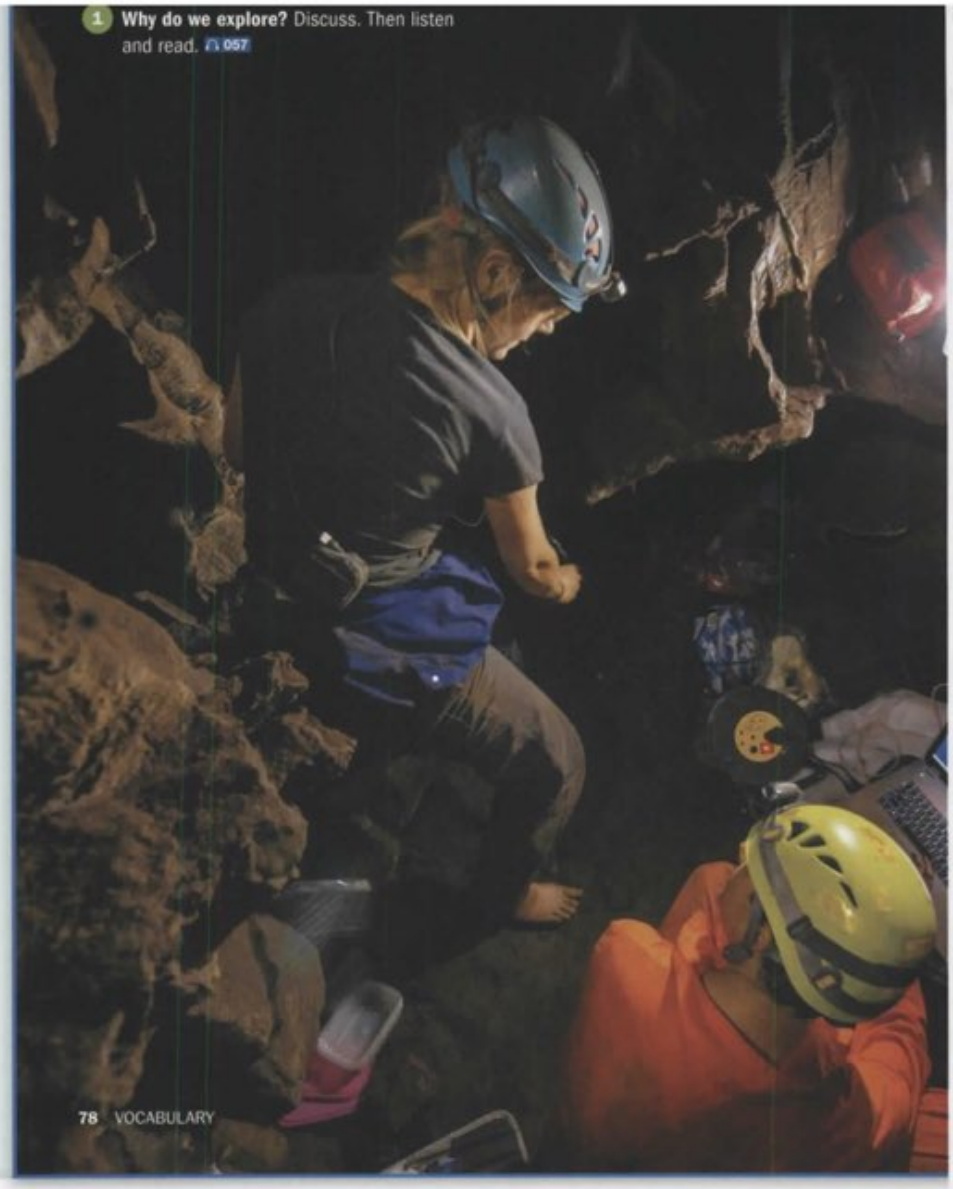
Objectives
Students will
- identify and use vocabulary related to exploration.
- use new vocabulary to read about and discuss explorers and their work.

Target Vocabulary *curious, drive, encounter, exciting, expert, high-tech, investigate, knowledge, look into, pioneer, purpose, remote, research*

Content Vocabulary *3D scanning, assemble, contribution, gather, palaeoanthropologist, squeeze*

Pronunciation Sounds of letter *x*

Resources Graphic Organiser: T-chart; Pronunciation Answer Key (Teacher's Resource CD-ROM/Website); Tracks 057–058, 122–124 (Audio CD/ Website/CPT); CPT: Vocabulary and Pronunciation



Warm Up

- **Build background** Say *Today, we're going to read about three explorers. One of them explores the ocean, another explores caves and a third creates technology that helps explorers learn about many different places.*

- Draw the following T-chart on the board:

Ocean	Cave

- Give each student a copy of the T-chart graphic organiser and tell students to copy the column heads onto their charts. Say *Imagine you had the opportunity to explore the ocean. Make a list of all of the things you can see and learn about while exploring underwater.* Give students several minutes to complete the first column on their chart. Then repeat the instruction for the *Cave* column.

- Divide the class into small groups and tell them to discuss their charts. Then ask several students to share answers and write them in the chart on the board. When you finish, ask *Does this list make you want to explore the ocean? a cave?* Ask several students to answer and explain their responses.

Present 1 2

- Ask students to open their books at pages 78–79. Point to the photo and say *The people in the photo are exploring a cave.* Ask *What equipment can you see in the photo?* (helmets, lights, computers) *What do you think they're looking for with this equipment?* Students may answer that the explorers are looking for ancient artefacts or fossils. Ask a student to read the caption aloud to confirm students' responses.

The desire for **knowledge** about our world pushes explorers into the smallest caves, the deepest oceans and even outer space. People have been exploring for centuries. But any explorer will tell you that the more they **investigate**, the more they realise there's still so much to learn.

Explorer Sylvia Earle is a deep-sea **pioneer** with a long list of achievements. She has engaged in 7,000 hours of underwater study and written nearly 200 scientific articles on her findings. In 1970, she and a team of women 'aquanauts' were required to live underwater for weeks at a time to **research** marine life. The fact that so much of the ocean remains undiscovered **has driven** Sylvia's work. In fact, even though explorers have been studying the world's oceans for years, they've only seen about five per cent of them! Sylvia's **purpose** in life has been to protect the sea, and she encourages others to do so as well.

Palaeoanthropologist Lee Berger has been searching for ancient remains in **remote** parts of Africa for over two decades. He is **curious** about the origins of human beings. Lee has made some **exciting** discoveries over time, but his most important discovery came in 2014 when he led an expedition at the Rising Star cave system, near Johannesburg, South Africa. To explore one of the caves, researchers had to squeeze through an opening less than 25 cm. (10 in.) wide. Lee wasn't small enough to do it himself, so he gathered an **expert** team of female researchers who made it inside. There they found over 1,550 bones, representing at least 15 individuals.

The bones were brought to the lab where skeletons were assembled. Lee used 3D scanning to identify an entirely new species. Creating the skeleton was just the first step in understanding the new species. 'The discoveries we're now making show that, in some ways, the age of exploration is still just beginning,' says Lee.

Engineer and inventor Corey Jaskolski not only explores, but also creates **high-tech** tools that allow people to **look into** the past without harming its artefacts. Corey wants explorers to protect what they **encounter** so that future generations can learn from them, too. 'When we discover things, we have a responsibility to preserve them as well,' he says.

Scientists working inside the Rising Star cave.

2 LEARN NEW WORDS Listen and repeat. 058

3 Work in pairs. Why do you think each explorer's contributions are important? How does an explorer's work matter to all of us?

BE THE EXPERT

About the Photo

The photo shows photographer Elliot Ross and palaeontologist Ashley Kruger communicating with Lee Berger via computers from inside of the Dinaledi chamber of the Rising Star cave system. Lee found out about the fossils and had to select a special team of six slender experts to get into this area of the cave. In several areas, openings are less than 25 cm. (10 in.) wide. To access the Dinaledi chamber – the most remote part – explorers had to fall down a narrow chute. However, the difficult entry was worth it: this chamber is where the bones of a new species were located.

Pronunciation

Go to Student's book page 146. Use Audio Tracks 122–124.

Sounds of letter *x* The letter *x* can sound like /gz/ if (1) the *x* comes before a vowel and (2) the syllable after *x* is stressed. Otherwise, the pronunciation is /ks/.

Students may have trouble with words like ***Mex****ico* or ***ex****ercise*, since these follow the first rule, but not the second, so they sound like /ks/. One exception is the word ***ex****it*, which can be pronounced either way.

- 1 Play **Track 057** and tell students to listen and read. Discuss the reading with students. Ask them to respond to the following:
  What do explorers realise once they start investigating? (There's still so much to learn.)
  What is Sylvia Earle's purpose in life? (protecting the sea)
  What was Lee Berger's most significant discovery? (bones of an entirely new species)
  How can Corey Jaskolski's high-tech tools help preserve ancient artefacts? (Researchers can study them without moving/harming them.)
- 2 **LEARN NEW WORDS** Play **Track 058**. Tell students to listen and repeat. Then tell students to work in pairs to practise pronouncing the words together.
- Play **Track 058** a second time, this time pausing after each word. Repeat the word aloud and then ask a student to use the word in a sentence describing one of the explorers.

Practise 3 4 5

- 3 **Give examples** Read the questions aloud and then say *We've read about three explorers. Now, let's think about their contributions or what their work brings to their fields of study.* Give an example. Say *Sylvia Earle has explored for many hours underwater and she has published more than 190 articles about what she's learnt. Other people read these articles and learn from her discoveries.* Ask students to work in pairs to discuss the contributions of Lee Berger and Corey Jaskolski.

VOCABULARY

Objectives
Students will
- practise using vocabulary related to exploration.
- use a vocabulary strategy to learn new words.

Target Vocabulary *achievement, encourage, engage in, require*

Vocabulary Strategy Words with *en-* prefix

Content Vocabulary *360-degree, camera trap, disturb, high-resolution*

Resources Online Workbook/Workbook pages 46–47; Worksheet 4.5.2 (Teacher's Resource CD-ROM/ Website); Tracks 059–060 (Audio CD/ Website/CPT); CPT: Vocabulary

Materials graph paper (two pieces per student) *(optional)*

4 Read and write the words from the list. Make any necessary changes.

curious	drive	encounter	exciting	expert
high-tech	investigate	knowledge	purpose	remote

Corey Jaskolski is an *expert* engineer and inventor whose *high-tech* inventions are helping explorers – and ordinary people – to see the world in a different way. For example, his underwater robotic cameras can get high-resolution photos of very *remote* parts of the ocean. These devices were used to *investigate* and film the *Titanic* shipwreck. Corey has also developed 360-degree viewers for the *purpose* of allowing people to explore *exciting* places, such as King Tut's tomb, just by moving their mobile devices! Corey also has created night-vision cameras and 3D camera traps that help photographers capture images of animals without disturbing them. Conservation is what *drives* much of Corey's work. His equipment can be used to gain *knowledge* about places or animals without harming them at all. Corey wants to protect what's here on Earth so that future generations can enjoy exploring just like he does.


Corey Jaskolski

5 LEARN NEW WORDS Listen to these words and match them to their definitions. Then listen and repeat. T 059 060

achievement	encourage	engage in	require

encourage 1. help or support someone
require 2. need something or make something necessary
engage in 3. be involved in a cause
achievement 4. success

6 YOU DECIDE Choose an activity.

1. **Work independently.** How well do you know your community? Investigate your area. Explore both online and 'in the field'. Share your experience with the class.
2. **Work in pairs.** How might technology help in making new discoveries? Make a list of five ideas. Present your list to the class.
3. **Work in groups.** Investigate Corey's work. Which of his inventions would you like to own? What would you do with it?

80 VOCABULARY

- Tell students to turn to page 80. Hold up your book and point to the photo. Say *This is Corey Jaskolski, the unit explorer. Corey is an engineer. He explores, but he also creates tools to help others explore.* Tell students to scan the text to identify the types of tools they'll read about.
- **4** Ask a student to read aloud the instructions for Activity 4. Then ask another student to read the words in the box aloud. Guide students to look at the reading on page 79 to review how each word is used in context. After students review the meaning of each word, give them time to complete the activity individually. Then review their responses as a class.
- **5 LEARN NEW WORDS** Play **Track 059** once and tell students to write each word next to the definition. Play it again and tell students to check their work. Then play **Track 060** and tell students to repeat each word and sentence. Review the answers to items 1–4 as a class. Then ask students to look for each word in context on page 79.
- **Vocabulary strategy** Write the word *encourage* on the board and underline the *en-* prefix. Read aloud the sentence with the word *encourage* on page 79. Say *The word encourage starts with en-.*

This prefix has more than one meaning. It can mean to cause. *For example, if you encourage someone to do something, your words or actions may cause this person to act.* Write the words *engage in* on the board. Say *The prefix* en- *can also mean* to put into something. *If I engage in an activity, I put my interest and efforts into that activity.*

Apply 6

- 6 YOU DECIDE Ask students to choose a project. Read aloud the three activity options. Tell students to form pairs or groups if they choose the second or third activity options.
- Tell students who choose the first activity to brainstorm different ways to virtually explore the community. Then tell them to choose a nearby place to explore. Point out that *in the field* simply refers to exploring outside the classroom or home. Allow students to choose a format to share their experiences with the class.
- Point out to students who choose the second option that technology doesn't necessarily need to be modern technology. They can find out about a past discovery that used the technology available at that time.
- There are several videos online in which Corey Jaskolski talks about his inventions and how they work. Guide students to view these videos to get information for their response to option three.

Extend

- Give each student two sheets of graph paper. Tell them to choose eight of the new vocabulary words. On one sheet of paper, tell students to practise writing the words as a crossword puzzle, intersecting letters from each word. Students should use this as a model to create their crossword puzzle on the other sheet of graph paper. After students draw the blanks for the puzzle on the second sheet of graph paper, tell them to write clues for each word. For example, if *exciting* is the first word going down, students can write *1. Down: interesting and appealing; not boring.* Students can also go online to generate a crossword puzzle.
- Collect puzzles and redistribute among the class. Allow time for students to complete the puzzles. Then return the puzzles to their authors, who will check the responses.
- If time allows, hand out **Worksheet 4.5.2**. Explain that students will use vocabulary words to talk and write about explorers.

Consolidate

- Divide students into three groups and assign each group an explorer: Sylvia Earle, Lee Berger or Corey Jaskolski. Set a timer for one minute and tell groups to make a list of as many vocabulary words as possible that relate to their explorer.
- After the timer goes off, ask groups to read aloud their lists and to briefly explain how each word connects to the explorer and his or her work.

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Vocabulary Strategy

Words with *en-* prefix The prefix *en-* comes from Latin and has two meanings, both of which students see in this lesson. First, *en-* means *to cause*. In addition to the word *encourage*, students can see this meaning in words like *enable* and *envision*. The prefix *en-* can also mean *to put into* or *to surround*. Students will see this meaning in words such as *enclose* and *engrave*. With certain consonant sounds, the prefix *em-* can also be used to convey this meaning, as in the words *embed* and *empower*.

Our World in Context

Corey Jaskolski has helped develop several tools that will help researchers learn more about animals and their activities. For example, he's developed a colour night-vision camera that can show activity at night in full colour, as though the images are being taken during the day. He has also worked on a camera trap to capture still images of animals in their habitats without their knowledge. This allows animals to be measured without trapping and tranquilising them. To get the results he needed for this camera, Corey tested the device on his own cat!

Formative Assessment

Can students

- identify and use vocabulary related to exploration?

  Ask students to use the words *high-tech, discovery* and *purpose* in a sentence about exploration.
- use new vocabulary to read about and discuss explorers and their work?

  Ask students to name one of Lee Berger's contributions as an explorer.

Workbook For additional practice, assign Workbook pages 46–47.

Online Workbook Vocabulary

SPEAKING STRATEGY

Objective
Students will
- use new phrases to hesitate or buy time during a conversation.

Speaking Strategy Hesitating or buying time when answering questions

Academic Language *buy time, hesitate*

Content Vocabulary *league*

Resources Online Workbook; Worksheet 4.5.3; Graphic Organiser: Pie chart (3 slices) (Teacher's Resource CD-ROM/Website); Tracks 061–062 (Audio CD/Website/CPT); CPT: Speaking Strategy

SPEAKING STRATEGY 061

Hesitating or buying time when answering questions

Where do you see yourself in five years?	Hmm, that's tough. I'd like to be studying in South America, but I might need to get a job.
What made you want to learn Cantonese?	Well, it's hard to explain. I guess I've just always wanted to travel to Guangzhou.
Why do you think humans explore?	That's a good question. Let me think about that one for a minute.

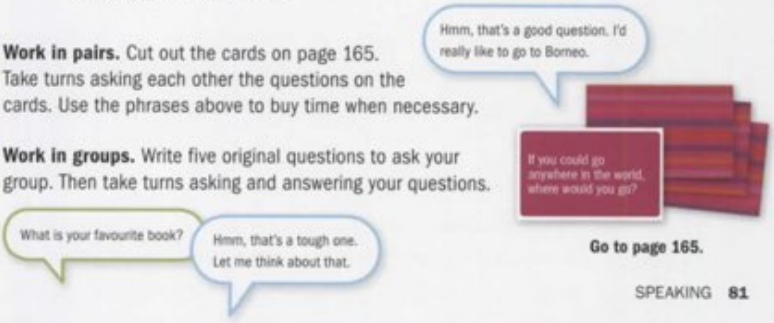
1 **Listen.** How does the speaker buy time before responding to the question? Write the phrases you hear. 062

2 **Read and complete the dialogue.** *Possible answers:*

Caleb: So, Kenji, how do you like living in Canada?
Kenji: _Well, it's hard to explain._ I guess I'm enjoying my experience overall, but there have been some challenges.
Caleb: What's been the biggest challenge?
Kenji: _Hmm, that's tough_. Probably speaking English all the time and trying to make friends.
Caleb: But joining the baseball team has made you really popular. We're number one in the league for the first time! How did you get so good at it?
Kenji: _That's a good question._ In Japan, I'm just a normal player. We practise a lot. All year, in fact. Don't you do the same with hockey?
Caleb: Some people do, but I just play for fun. Besides, I like playing baseball in spring.
Kenji: Would you like to visit Japan someday?
Caleb: _I guess_ it'd be fun, but it sounds like I'd better get serious about baseball first!

3 **Work in pairs.** Cut out the cards on page 165. Take turns asking each other the questions on the cards. Use the phrases above to buy time when necessary.

4 **Work in groups.** Write five original questions to ask your group. Then take turns asking and answering your questions.



Go to page 165.

Warm Up

- **Pre-teach** Ask students *What would you like to know about me? Write a question to ask me about my preferences, my goals, my plans and so on.* Encourage students to write open-ended, informational questions. Remind students to avoid personal or sensitive topics. If you feel uncomfortable talking about yourself to your students, role-play a popular celebrity and answer as though you were that person.
- Collect the questions and read aloud the ones that you would feel comfortable answering in front of the class. After you read the question aloud, model buying time. Say *Hmm … (my favourite food. That's tough).* Model using each of the strategy phrases.
- Read aloud five or six questions. Then say *With each question I read, I had to think about the answer. Today, we're learning how to use language to show that we're thinking about how to answer a question.*

Present 1

- Ask students to turn to page 81. Play **Track 061.** Say *Notice that the questions being asked are 'big' questions. When someone asks you a big or important question, you should think carefully about how to respond. Coming up with a response might take several seconds, but you don't want to be silent. By using a phrase to buy time, you're telling your listener, 'I heard you and I'm thinking about how to answer you'.*
- 1 Say *Now listen as two people have a conversation about studying abroad.* Play **Track 062** once and tell students to just listen to the dialogue. Then play the track again and tell them to write the phrases used to buy time.

Practise 2

- 2 Direct students' attention to Activity 2. Allow time for students to complete the activity independently.

Then tell students to compare their responses in pairs. Ask a pair of students to read the dialogue aloud.

Apply 3 4

- 3 Direct students to page 165 and tell them to cut the cards out. Students can create a single pile of cards and set them face-down on the desk.
- Invite a student to read the small card on page 81 aloud and another student to read aloud the model in the speech bubble. Tell students to do the activity in pairs. Walk around the room and make sure they're correctly using phrases to buy time.
- 4 Ask students to work individually to write questions. Remind them that they should avoid *yes/no* questions or other questions that do not require a thoughtful answer. Point out that students should also be sensitive when writing their questions, avoiding any that may be too personal. If students are struggling to write appropriate questions, provide the five questions for them. Then put students into groups of three to ask and answer each other's questions.

Extend

- Give each student a copy of the pie chart (3 slices) graphic organiser. Tell students to write each of the following in one of the sections on the graphic: *5 years, 10 years* and *25 years.*
- Say *I'm going to ask three students where they see themselves in five years.* Turn to a student and ask *Where will you be in five years?* Make sure the student buys time before responding.
- Tell students to walk around the classroom to talk to nine different students, each time talking about where they would be in 5, 10 or 25 years. Walk around the room as students work, listening in to their conversations. If necessary, answer the question yourself, modelling buying time as needed.
- If time allows, hand out **Worksheet 4.5.3**. Explain that students will use the worksheet to practise buying time in conversations.

Consolidate

- Prepare a list of questions. Include questions that require quick, easy answers (*Do you like peanuts?*) and others that require more thoughtful answers (*What's the best meal you ate this week?*). Include questions about a variety of topics in your list.
- One by one, read your questions aloud and ask students to put their hands up each time they hear a question that would require them to hesitate or buy time before answering.
- Discuss each question individually. Point out that if a student uses phrases for hesitating or buying time for an easy question, it may be interpreted as sarcastic or disrespectful (*Do you like peanuts? Hmm ... let me think about that.*) Then invite students to give additional examples of questions that they *wouldn't* buy time for before answering.

BE THE EXPERT

Strategy in Depth

In English, when a question is asked, it's important that a speaker signal that he or she is listening and has heard the question. Phrases for buying time will show that the speaker is thinking of an answer. When a speaker asks a question, the listener may look disinterested or impolite if he or she is silent while thinking of an answer. This is when it's appropriate to use phrases for buying time. On the other hand, when a question requires a simple, direct answer, it may be perceived as impolite to use phrases for buying time.

Additional helpful phrases for buying time include:

Well, let me see ...
Great question ...
That's hard to say ...
I hadn't thought of that ...

Formative Assessment

Can students

- use new phrases to hesitate or buy time before answering a question?

Ask students *What do you want to be doing in 20 years?* Make sure they use a phrase to buy time in their response.

Online Workbook Speaking Strategy

GRAMMAR 1

Objectives

Students will

- use narrative tenses to understand and tell stories.
- identify and use new words related to Barrington Irving's record-setting flight around the globe.

Grammar Narrative tenses: Telling a story

Target Vocabulary *educate, globe, motion, route, set a record*

Academic Language *narrative, prompt*

Content Vocabulary *accept, historic, offer, ice pick, solo, stop*

Resources Online Workbook/Workbook pages 48–49; Tracks 063–066 (Audio CD/Website/CPT); CPT: Grammar 1

Materials copies of a comic strip (one per pair), pieces of card

GRAMMAR 063

Narrative tenses: Telling a story

Barrington Irving **had been preparing** to become a pilot since he was 15.

He **found** a manufacturer to build an aeroplane from donated parts that he **had received**.

On the day of the flight, he **was** ready, but he **was feeling** a little nervous.

Finally, Barrington **set off** on his historic flight. He **flew** around the world in 97 days and set a world record.

1 Listen. Answer the questions below using the narrative tenses. 064

Possible answers:

1. What career had Barrington been preparing for?
   He had been preparing for a career in professional football.
2. What happened when Barrington met a Jamaican pilot?
   He decided to become a pilot himself.
3. How did he start learning to fly?
   He used a video game.
4. What had he been offered? Did he accept the offer?
   He had been offered the chance to play football at universities, but he turned them down.
5. What was Barrington doing before his first solo flight?
   He was practising and going to flight school.
6. How was his first solo flight?
   He flew well and landed the plane with no problems.

2 Read. Underline the narrative tenses in the paragraph.

3 Write. Re-read the prompt from Activity 2. Write your own response using the narrative tenses. Then share your response in a group.

Prompt: Talk about a time when you achieved something important. What did you achieve? How had you been preparing?

Once I climbed a mountain that was over 3,000 m. (10,000 ft.) tall. I had been training with my dad all spring to get ready. We had been practising on smaller mountains. To climb the mountain, we were using special equipment like ice picks and thick ropes. After we had reached the top, it felt great to look down on the forest below us. I later climbed three other mountains with my dad, and we plan to do another next month.

82 GRAMMAR

Warm Up

- Say *Today we're going to learn about telling stories. When we tell stories, we need to use different tenses for verbs or action words. Although we use the past tense, there are different forms of the past tense in English. What are they?* (past simple, past continuous, past perfect and past perfect continuous) If students cannot name these tenses, guide them to give examples of verbs in different past tenses.
- **Set the stage** Say *Listen as I tell a story. As you listen, write the verbs that you hear.* Tell the class a story about something that happened to you recently. Use the narrative tenses in your story. Or, tell the following story: *Last Saturday, I went out for a run. I had been running through the same park every day for years and I had never seen anything unusual. But last Saturday was different. The run started off OK. I was running at a good speed and was feeling great. I had just gone around the park's lake when I saw a tiger! It was sleeping under a tree, as if it belonged there. I felt very afraid. I froze. I didn't know what to do: I had never seen a tiger outside the*

4 **LEARN NEW WORDS** **Listen to the story of Barrington's first solo flight around the world.** Then listen and repeat. 065 066



This map shows the **route** that Barrington flew. His plane was in **motion** for most of his 97-day trip around the **globe**.



Barrington **set a record** as a pilot. Now he works to **educate** students in maths and science.

5 **Work in pairs.** Read the interview questions and fill in the blanks with the correct words from the box. Then answer the questions as if you were Barrington. Use the narrative tenses.

globe	motion	pilot	route	set a record

Possible answers:

1. Q: How had playing video games prepared you to become a pilot?
   A: I had been using video games to practise flying.
2. Q: How were you able to get an aeroplane to fly around the globe?
   A: I had helped find donated aeroplane parts to get the plane built.
3. Q: How many stops were on your route?
   A: There were 27 stops on my route.
4. Q: What were you doing to stay awake while in motion for so many hours?
   A: I was singing to myself.
5. Q: How did you feel when you heard you had set a record?
   A: I felt excited.

6 **Work independently.** Investigate another person who has explored new places. Write a narrative about the explorer's route, experiences and accomplishments. Share what you learnt with the class.

zoo! Suddenly, the tiger rolled over and stretched. I thought it would wake up. Luckily, the tiger went back to sleep. I quickly turned and ran home. I had never run so fast in my life!

- Ask students to identify the verbs you used in your story. Write the verbs on the board. Say *Notice that you have different verb forms here, such as* had been running, had run *and* ran. Ask students to identify the different tenses of the verbs on the board.

Present

- Tell students to open their books at pages 82–83. Say *We've learnt four past tenses: past simple, past continuous, past perfect and past perfect continuous. These are called the* narrative tenses. *We use narrative tenses together to describe a past event or to tell a story.*
- Direct attention to the yellow box at the top of page 82. Say *Find verbs in the past simple.* Invite students to name the verbs in the past simple. (found, was, set off, flew) Repeat for the other three narrative tenses. Then play **Track 063** and tell students to follow along.

BE THE EXPERT

Grammar in Depth

Narrative tenses are used to describe past actions or events. Four past tenses make up the narrative tenses:

- past simple (watched, spoke)
- past continuous (was watching, were speaking)
- past perfect (had watched, had spoken)
- past perfect continuous (had been watching, had been speaking)

The most common tense when telling a story is the past simple. Use of the other tenses helps to clarify when events in the story happened in relation to one another.

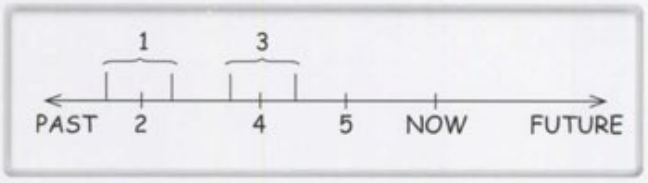
About the Photo

The photo shows National Geographic Explorer, pilot and educator Barrington Irving who was, at 23, the youngest person ever to fly around the world solo. He was also the first African American to do so. Barrington faced many obstacles before finally taking off on this historic flight in 2007. Before he could take off, he needed a plane. He had more than 50 rejections for sponsorship before finding aeroplane-part manufacturers who were willing to donate parts to have his plane built. When he finally took off, he had no weather radar equipment, no de-icing system and only $30 in his pocket. After 26 stops in 97 days, he returned to the United States. Barrington held the record for the youngest pilot to fly around the world until 2012, when 22-year-old Swiss pilot Carlo Schmid broke it.



- **Explain** Say *Listen to the story: I had been thinking about becoming a pilot for a long time. I had even researched flying schools. Then, one day, I was talking to my cousin and he told me I could install flight simulation software on my mobile device. So, I did – and I learnt to fly without leaving my house!*

- Create a timeline on the board and label it from left to right: *past*, *now* and *future*. Repeat the story, writing the events on the timeline: *1. I had been thinking about becoming a pilot for a long time.* Draw two points in the most distant past on the timeline and connect them with a wavy line to show continuous action. Label this with the number 1. Then say *2. I had even researched flying schools.* Point out that the past simple is used for a single action in the story. Draw a single line under the area for number 1 and label it with the number 2. Say *This shows that the action researched flying schools happened sometime while I had been thinking about becoming a pilot.* Continue: *3. Then, one day, I was talking to my cousin ... 4. he told me I could install flight simulation software on my mobile device. 5. So, I did – and I learnt to fly without leaving my house!* Mark the timeline as follows:



- Put students into pairs. Ask them to number the events in the yellow box in a similar way and mark them on a timeline. Their responses may vary, but check for the distinction between single actions and continuous actions. Discuss their work as a whole class.

Practise 1 2 3

- 1 Ask a student to read the instructions aloud and then tell students to preview the questions. Then say *You're going to hear an audio passage about how Barrington Irving got his start as a pilot. I will play the audio one time. Just listen the first time. Then I'll play it a second time. As you listen the second time, answer the questions.* Play **Track 064** once and remind students to just listen. Play it a second time and ask them to respond to the questions. Ask students to compare their responses in pairs. If necessary, play **Track 064** a final time so that students can check their work.

- 2 Direct students' attention to the paragraph on the bottom right-hand side of page 82. Ask a student to read the prompt and the paragraph aloud. Then tell students to work together to underline the verbs in the paragraph. Review their work. Ask students to read the underlined verbs in order, identifying the tense of each verb.

- 3 Re-read the prompt from Activity 2 aloud. Say *In Activity 2, we read about a teen climbing a mountain. The paragraph told the story about what was done to prepare for the climb, how she climbed a specific mountain and how she felt when she reached the top. Now, think about your own important achievement. Talk about what you did before and what happened when you achieved it. Use all of the narrative tenses.*

- If time allows, tell students to write their paragraphs in class. Otherwise, assign Activity 3 for homework. Tell students to read their stories in small groups. Students can invent a story if they don't have a specific achievement that they'd like to discuss with the class.

Apply 4 5 6

- 4 **LEARN NEW WORDS** Say *We've heard the story of how Barrington Irving learnt to fly. Now we're going to listen to learn about his historic flight. Look at the map.* Hold up your book and point to the map on page 83. Say *This map shows Barrington's flight around the world. When he completed this flight, he was the youngest person to fly around the world alone.* Play **Track 065.**

- Invite students to read the text that accompanies the photo of Barrington and the map that shows his route. Then play **Track 066** and ask students to repeat the words and sentences they hear. Review the meaning of each new word.

- 5 Read the instructions aloud. Review the meanings of the words in the box. Then say *Look first at the questions. Work with a partner to match each word from the box to the question that it best completes.* Once students have completed each question, ask them to respond as though they were Barrington. If necessary, model answering the first question in the first person for students. After students have completed all of the responses, invite different pairs to role-play the interviewer and Barrington for each question and answer set.

- 6 You may want to assign this activity for homework. Students can go online to learn about explorers or they may prefer to choose an explorer that they've learnt about in this course. Allow time for students to give short presentations on the explorer they researched. Remind students to include all four narrative tenses in their responses.

Extend

- Give pairs of students a set of five or six cards. Tell them to write a sentence on each card to tell a story. Students can create a new story or they can rewrite the sentences they used for Activity 2 onto the cards. Remind students to include each of the narrative tenses in their stories.

- Once students have written their stories, tell them to mix the cards up into a pile. Tell pairs to swap their pile of cards with another pair.

- Give students time to arrange the story on their cards in the correct order. Once the stories are in order, the pair who wrote the story should check for accuracy.

Consolidate

- Choose a short comic strip that tells a story. Try to find a comic strip without words. If there are words, cross them out. Make enough copies of the comic strip so that there is one copy for each pair of students.

- Give students two minutes to write a brief story about the comic strip using each of the narrative tenses. Encourage students to be creative in their stories. Then ask pairs to share their stories with the class.

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Teaching Tip

Remember to consider students' different learning styles as you plan each unit's lessons. During the course of each unit, try to provide an equal number of visual, aural and kinesthetic activities. Visual activities involve using photos and illustrations, diagrams and other graphics. Aural activities provide opportunities for students to listen to songs, dialogues and other audio input. Kinesthetic activities involve movement of the body and manipulation of items, such as flashcards or game pieces.

Formative Assessment

Can students

- use narrative tenses to understand and tell stories?

  Ask students to say how Barrington Irving became a pilot.

- identify and use new words related to Barrington Irving's record-setting flight around the world?

  Say *Describe Barrington's solo flight around the world. Why was it historic?*

Workbook For additional practice, assign Workbook pages 48–49.

Online Workbook Grammar 1

READING

Objectives
Students will
- read about a gene associated with exploration.
- identify and use new words from the reading.
- make a personal connection to the reading.

Reading Strategy Make a personal connection

Target Vocabulary *associated, gene, motivate, trait*

Vocabulary Strategy Pronunciation

Content Vocabulary *complex, context, nomadic, rate, spread, tribe*

Resources Online Workbook/ Workbook pages 50–51; Worksheet 4.5.4; Graphic Organiser: Word web (Teacher's Resource CD-ROM/ Website); Tracks 067–068 (Audio CD/ Website/CPT); CPT: Reading

Materials pieces of paper



THE Explorer GENE

Are we born to explore?

Of all the animals on Earth, none are so driven to explore as humans. Other animals will go in search of food or water. But humans can be motivated simply by the possibility of discovery. So what is it exactly that caused us to spread out across the globe 60,000 years ago, instead of just staying in Africa?

Perhaps it's in our DNA. In 1999, Dr Chuansheng Chen led a team of scientists who were studying a gene known as *DRD4-7R*. This gene is found in about 20 per cent of all humans. It's been associated with higher rates of risk-taking, exploration and interest in new ideas. Dr Chen found that *DRD4-7R* is more common in societies that move around a lot than those who don't. For example, studies in Africa show that the gene is much more common in nomadic tribes than in tribes that prefer to stay in one place. Several other researchers have studied this topic and found additional evidence to support Dr Chen's claim.

Journalist and National Geographic Fellow Paul Salopek is walking from where humans began in Ethiopia, Africa, to the southern tip of South America, following our ancestors' ancient journey.

1 **BEFORE YOU READ** **Discuss in pairs.** Based on the title and the photo, what do you think you'll learn in this reading?

2 **LEARN NEW WORDS** **Find these words in the reading.** What do you think they mean? Look at how they're pronounced in a dictionary. Say them aloud. Then listen and repeat. 067

associated gene motivate trait

3 **WHILE YOU READ** **Think about a person you know who might have the explorer gene.** 068

84 READING

Warm Up

- **Build background** Say *So far in this unit, we've learnt about people exploring the caves, oceans, skies and even the edge of space. We've also talked about whether or not we would want to explore these places.* Gesture towards students and ask *How many of you would like to explore caves? Please put your hands up.* Ask the question again for *the ocean* and *outer space*.

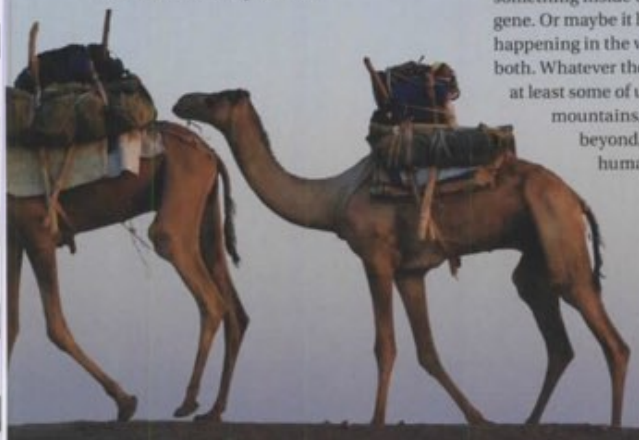
- Tell students to take out a piece of paper. Say *Some of you put your hand up to show that you'd like to explore these places; others did not. Think about your own personality. What personality traits do you have that affect your desire to explore? For example, I want to explore because I'm curious, so I'll write* curious *on my paper.* Give students several moments to write as many adjectives as they can that relate to wanting – or not wanting – to explore.

- Tell pairs of students who want to explore to work together to compare their lists of personality traits. Tell pairs who don't want to explore to do the same. After a few moments, ask students to

But can a single gene be responsible for a trait as complex as the desire to explore? Dr Kenneth Kidd doesn't think so. He thinks *DRD4-7R* might increase curiosity, but other equally important sets of genes give us intelligent minds and skilled hands. We then use our minds and hands to create things. He believes that not just one gene, but groups of genes work together to create complex behaviours like exploration.

The context we live in also plays a role in our desire to explore. For example, during the European Age of Exploration, explorers became rich and famous for their discoveries. This drove others to try to increase their wealth through exploration. In this case, their exploration was more likely motivated by money than by genes.

Maybe the desire to explore comes from something inside us, such as the *DRD4-7R* gene. Or maybe it has more to do with what's happening in the world around us. Maybe both. Whatever the reason, it seems we (or at least some of us) will keep exploring the mountains, the sea, the stars and beyond, because that's just what humans do.



4 AFTER YOU READ Work in pairs to answer the questions.

1. What makes humans explore? How are we different from other animals?
2. What traits is the *DRD4-7R* gene associated with?
3. What percentage of humans have this gene?
4. What is Dr Kenneth Kidd's opinion regarding *DRD4-7R*'s connection to exploration?
5. What else might cause humans to explore?

5 Work in pairs. Describe the person that you thought of in Activity 3. Give examples to explain why you think this person has the gene.

6 Discuss in groups.

1. Do you believe a gene causes humans to explore? Or do you think it has more to do with other factors? Explain.
2. Do you think you have the *DRD4-7R* gene? Explain, with examples. What other beliefs and behaviours might be caused by something in your genes?
3. Are humans exploring more now than in the past? Will we ever stop exploring? Explain.

share their responses. Make a list of common traits shared by students who do want to explore. Do the same for students who don't want to explore.

Before You Read 1 2

- 1 Tell students to open their books at pages 84–85. Say *We've talked about our personality traits and how they affect our desire to explore. Now we're going to read* The Explorer Gene. *Genes are parts of the cells in our bodies that determine what we're like. Genes affect our appearance. They can also affect our behaviour. Think about this as you answer the question.* Tell students to discuss their predictions in pairs. Then discuss their ideas as a class.
- 2 **LEARN NEW WORDS** Say *We're going to look at some new words that will help us to understand the reading.* Say the first word aloud: *associated*. Ask students to repeat the word. Then tell them to scan the reading to look for the word.

BE THE EXPERT

Reading Strategy

Make a personal connection When students connect a reading with their own experiences, they are able to engage with the text more and the result is increased comprehension. To help students make a personal connection, encourage them to consider the following:

- what or who the text makes them think of
- how the text relates to their lives
- which of their own experiences are similar to what's being described in the text
- how their values and beliefs are evident in the text

Vocabulary Strategy

Pronunciation When students are learning new words, it's important that they find out how to pronounce them correctly. By looking up a word's pronunciation in the dictionary, students may realise that they're familiar with the word, even if they didn't recognise it in writing. Students may think that just knowing the meaning of new vocabulary is sufficient. Remind them that it's equally important to say the word correctly in order to use it effectively.

About the Photo

National Geographic Fellow Paul Salopek is shown here on his *Out-of-Eden* walk, which is taking place over the course of seven years, from 2013 to 2020. During this time, Salopek will be walking 33,800 kilometres (21,000 miles) with the goal of tracing the migration of our human ancestors. His journey began in Ethiopia and will end at the southern tip of South America. You and your students can go online to find updates on his journey. Every 160 km. (100 mi.), Salopek stops to blog about his experience. He is also sharing the experience in real time for classroom use. Visit www.outofedenwalk.nationalgeographic.com to learn more.

Related Word

camel



- **Vocabulary strategy** Write the word *associated* on the board. Tell students to look the word up in a dictionary and then try to pronounce it. Then model pronouncing the word correctly. Say *When we learn a new word, it's important to learn its pronunciation. It's also important to realise that some words are pronounced differently in different English-speaking regions.* Tell students that the word *associated* is pronounced differently in British English to American English. Say *You know that the letter c followed by i makes a soft /s/ sound – associated. But this isn't the case for the word associated in American English.* Say *In American English, the 'ci' is pronounced /sh/.* Emphasise the /sh/ sound as you say the word *associated*. Say *Be aware of these differences in pronunciation and consider where the people you're speaking to are from.*

- Tell students to find the other words in the text and then use a dictionary to look up each word's pronunciation. Review correct pronunciation with them. Then play **Track 067**. Tell students to listen and repeat each word and sentence.

While You Read 3

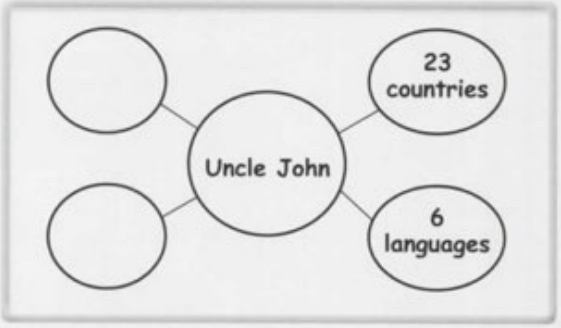
- 3 Say *Now we're going to read about the explorer gene.* Play **Track 068** and ask students to follow along.

- Say *Let's re-read the text. This time, think about someone you know who may have the explorer gene. Do you have a friend or family member who likes to travel? Who is it? Where has this person travelled?* Tell students to work in small groups to re-read the text. Then ask each student to name a person they know who might have the explorer gene. If students cannot think of anyone they know personally, they might mention a film or literary character.

After You Read 4 5 6

- 4 Put students into pairs. Tell them to discuss their answers to the questions. Remind students to look for information and examples from the text to support their answers. Review their responses as a class.

- 5 **Model** Give students a copy of the Word web graphic organiser. Model completing it by talking about someone you know who may have the explorer gene. Say *Write the name of the person you know who may have the explorer gene in the middle of your web. For example, my (Uncle John) may have the gene. I'm going to write (his) name in the middle of the web.* Write the name. Then continue by saying *I think (he) has the gene because (he has travelled to 23 countries).* Pause to write this information on the web. Then continue by saying *(He) has also (learnt six languages).* Again, stop to write the corresponding information on the web. Continue this until you have completed the web with at least four pieces of information.



- Allow time for students to complete their own webs. Point out that they can draw additional circles as necessary. Then tell them to use the examples on their web in a discussion with their partner.

- 6 Tell students to form groups of three or four to answer the activity questions. In their discussions, remind students to support their answers with evidence from the text and their own experiences.

Extend

- Tell students to write a five-question survey about exploration and the idea of an explorer gene. Students can ask about exploration goals, experiences or the validity of the theory that $DRD_{4\text{-}7}R$ is actually responsible for making people explore.

- Tell students to survey five to ten classmates and summarise the results. Review them as a class, focusing on similar goals, experiences and attitudes.

- **Worksheet** If time allows, hand out **Worksheet 4.5.4** in class. Remind students to review the new words presented on page 84. Tell students to complete the worksheet individually and then compare their responses with a partner.

Consolidate

- Make a list of ten people that all students are familiar with. These people could be teachers or administrators in the school, celebrities, athletes or people introduced in the readings and activities in this book.

- Say *Today we read about the possibility of an explorer gene. Remember that about 20 per cent of people may have this gene. Twenty per cent of the people on this list equals two people. Think about which two people are most likely to have the explorer gene. Write their names and at least two reasons why you think this.*

- Give students several moments to make their choices and write their responses. Then invite students to share their ideas with the class. Try to get a class consensus on which two people have the gene and discuss why.

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Teaching Tip

Don't be afraid to change the way your classroom is arranged based on what you're doing in class. You may want to arrange the desks or tables in rows for direct instruction or quiet reading. For a debate or game, it may be better to arrange students' seats in two groups, facing one another. Desks should be joined together for pair-work and group-work activities. Get students into the routine of arranging desks in a way that complements learning and returning desks to their original position at the end of the class. If everyone is involved in creating the arrangement, it will happen quickly and effortlessly.

Answer Key

Comprehension 4

1. Humans are driven to explore beyond just looking for food and water.
2. higher rates of risk-taking, exploration and interest in new ideas
3. 20 per cent
4. He doesn't believe one gene can be responsible for a trait as complex as the desire to explore.
5. context / what's happening in the world around us

Formative Assessment

Can students

- read about a gene associated with exploration?

  Ask *What is the gene* $DRD_{4.7}R$ *associated with?*

- identify and use new words from the reading?

  Ask students to use *gene* and *trait* in a sentence.

- make a personal connection to the reading?

  Say *Describe someone you know who might have the explorer gene.*

Workbook For additional practice, assign Workbook pages 50–51.

Online Workbook Reading

VIDEO

Objectives

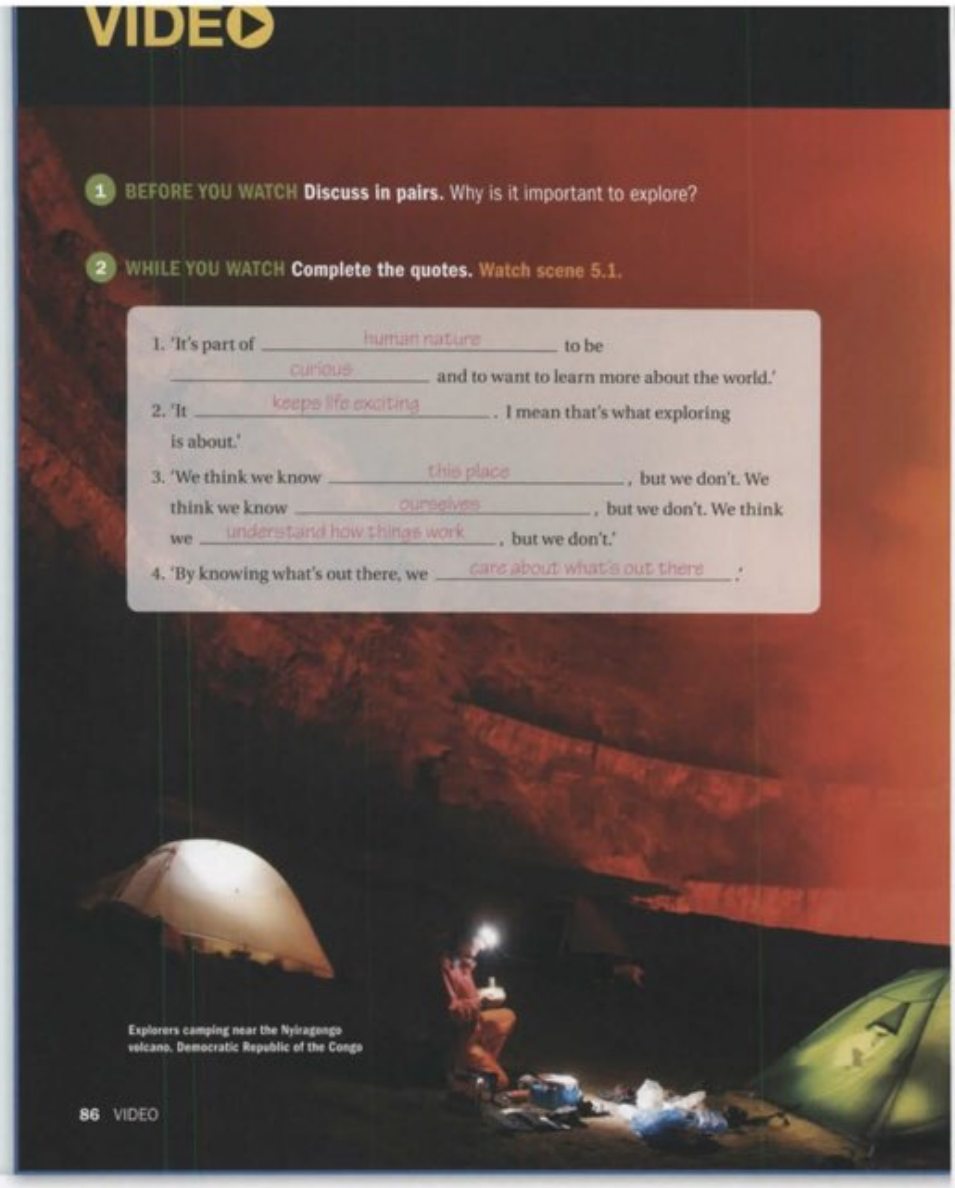
Students will

- identify why it's important to explore.
- apply the message of the video to their personal lives.

Academic Language *quote, reflect*

Content Vocabulary *pursue*

Resources Video scene 5.1 (DVD/Website/CPT); Online Workbook; CPT: Video

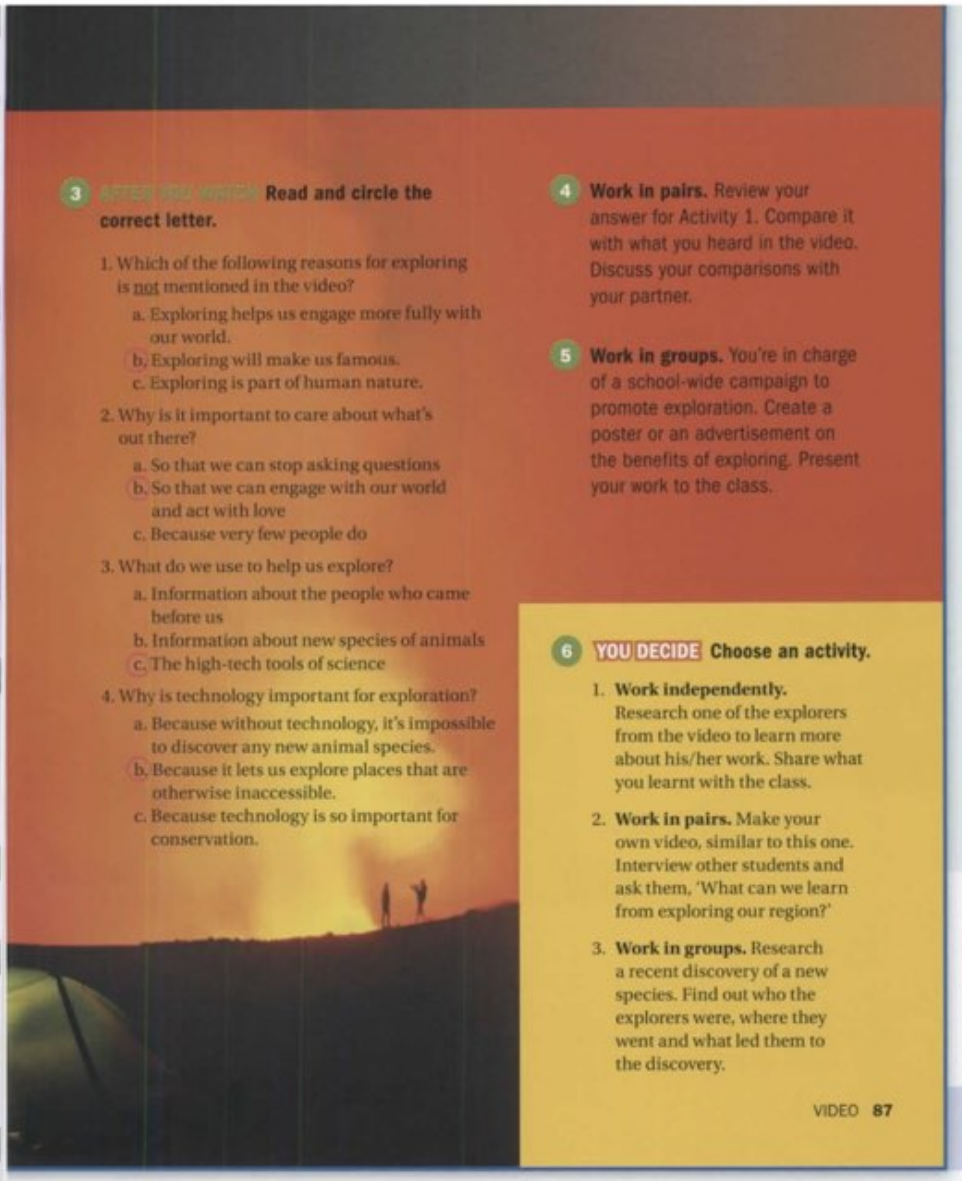


Before You Watch 1

- Tell students to open their books at pages 86–87. Say *Look at the photo. You can see several explorers. What are they exploring?* (a volcano) Ask *What risks do they face?* (getting burnt, the volcano erupting) *What do you think they might want to learn from exploring this place?* Listen to several students' ideas. Then ask *Would you explore a volcano? Why or why not?* Ask individual students to answer.
- 1 Say *We're going to watch a video called* Why Is It Important to Explore? *Before we watch, think about this question. Discuss it with your partner.* Remind students to use phrases for buying time as they discuss the question. Encourage pairs to come up with at least four reasons. Ask partners to share their ideas with the class.

While You Watch 2

- 2 Say *Read the incomplete quotes in the box. You're going to hear National Geographic Explorers answering the question* Why is it important to explore? *Listen to their answers and fill in the quotes as you watch.* Allow time for students to review the quotes.
- Play **Video scene 5.1** once and ask students to complete the quotes. Play it again, this time pausing after each quote to allow students to complete any items they may have missed the first time and to check their work. As they watch a second time, tell students to identify the explorer who says each quote. When the video ends, challenge students to connect Cory Richards and Lee Berger's quotes to their work.



3 AFTER YOU WATCH **Read and circle the correct letter.**

1. Which of the following reasons for exploring is not mentioned in the video?
   a. Exploring helps us engage more fully with our world.
   b. Exploring will make us famous.
   c. Exploring is part of human nature.
2. Why is it important to care about what's out there?
   a. So that we can stop asking questions
   b. So that we can engage with our world and act with love
   c. Because very few people do
3. What do we use to help us explore?
   a. Information about the people who came before us
   b. Information about new species of animals
   c. The high-tech tools of science
4. Why is technology important for exploration?
   a. Because without technology, it's impossible to discover any new animal species.
   b. Because it lets us explore places that are otherwise inaccessible.
   c. Because technology is so important for conservation.

4 **Work in pairs.** Review your answer for Activity 1. Compare it with what you heard in the video. Discuss your comparisons with your partner.

5 **Work in groups.** You're in charge of a school-wide campaign to promote exploration. Create a poster or an advertisement on the benefits of exploring. Present your work to the class.

6 YOU DECIDE **Choose an activity.**

1. **Work independently.** Research one of the explorers from the video to learn more about his/her work. Share what you learnt with the class.
2. **Work in pairs.** Make your own video, similar to this one. Interview other students and ask them, 'What can we learn from exploring our region?'
3. **Work in groups.** Research a recent discovery of a new species. Find out who the explorers were, where they went and what led them to the discovery.

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About the Photo

The photo shows scientists studying the Nyiragongo volcano, one of the most active volcanoes on the planet. The Nyiragongo is located near the city of Goma in the Democratic Republic of the Congo. Goma has an estimated population of one million people, all of whom are threatened by a possible eruption of the volcano. Nyiragongo erupted in 1977, shooting lava down its sides at a speed of around 100 kph. (60 mph.). Nyiragongo erupted again in 2002, forcing around 350,000 people from their homes and destroying parts of Goma.

Formative Assessment

Can students
- identify why it's important to explore?

Ask *What are two reasons given in the video for why it's important to explore?*

Online Workbook Video

After You Watch 3 4 5 6

- 3 Read each question and answer option aloud for students. Pause after each item to allow students to circle the correct letter. Explain that although more than one option may be true, students should think about the video's message to respond. After students finish, tell them to check their answers in small groups.
- 4 Ask a student to read the instructions aloud. Tell students to work with the same partner that they had for Activity 1. Tell pairs to compare their discussion with what they heard in the video. When they finish, ask them to discuss their comparison with another pair.
- 5 Ask a student to read the instructions aloud. Say *As you plan your poster and list the benefits, think about different types of exploration – exploration of our school, our town and the world.*
- If possible, encourage students to actually execute a school-wide campaign. Get permission for students to copy and hang their posters around the school building. Arrange for students to talk about the benefits of global and local exploration in assembly or to other classes.
- 6 YOU DECIDE Ask students to choose a project. Make a list of the explorers featured in the video and tell students who choose the first option to select an explorer from the list to profile. Guide students to online resources where they can learn about that person's work. Encourage students who choose this activity to focus on explorers that they haven't yet learnt about.
- Research recently discovered species and make a list for students who choose the third option. Ask students to include a photo of the species when they share their work with the class.

GRAMMAR 2

Objective
Students will
- use *the* correctly when talking about places.

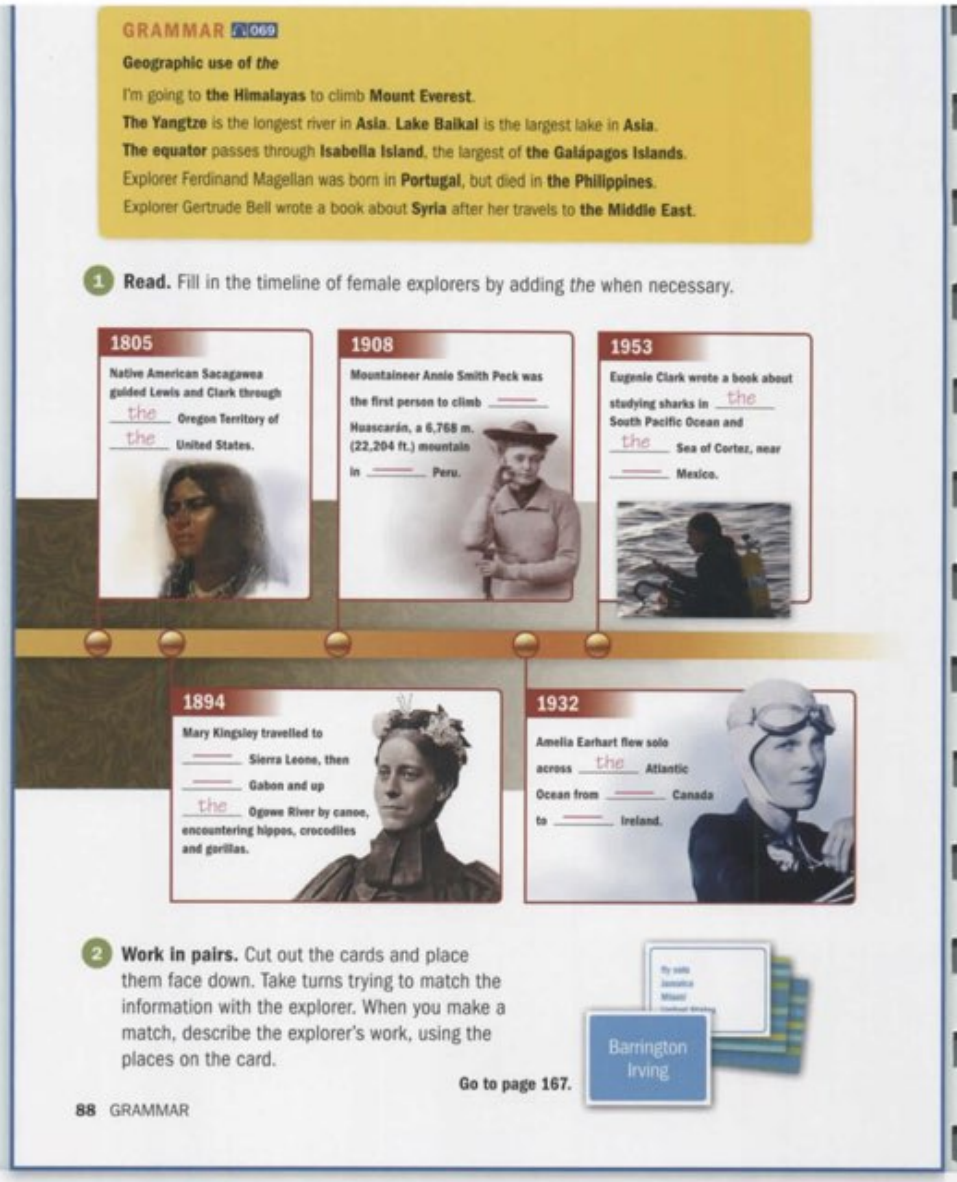
Grammar Geographic use of *the*

Academic Language *timeline*

Content Vocabulary *canoe, geographic, guide*

Resources Online Workbook/Workbook pages 52–53; Worksheet 4.5.5; Graphic Organiser: T-chart (Teacher's Resource CD-ROM/Website); Track 069 (Audio CD/Website/CPT); CPT: Grammar 2

Materials a bag, a timer, a world map, pieces of card



Warm Up

- **Build background** Write a list of places on the board: *India, Seoul, Amazon River, Philippines, Antarctica, United States, Andes* and *Costa Rica*.

- Say *Which of these places would you like to visit? Where would you like to explore?* Note whether students are using *the* appropriately before each of the geographic terms. If not, change the question to model correct usage. Ask *Would you like to explore Costa Rica? How about the United States?* Then say *As we talked about exploring different places, we used the before some places but not others. In today's lesson, we're going to learn when to add the before different place names.*

Present

- **Explain** Tell students to turn to page 88. Direct attention to the yellow grammar box. Play **Track 069**. Tell students to underline *the* as they hear it. Then repeat and discuss each sentence. For example, read aloud: *I'm going to the Himalayas to climb Mt. Everest.* Say *In this sentence, we see the before* Himalayas, *but not before* Mt. Everest. *What type of geographical feature is the Himalayas?* (a mountain range) Say *That's right! It's a mountain range. So we add the before the name of a mountain range.* Make a T-chart on the board. Label one column *the*. Put a dash or symbol (⊘) at the top of the other column to indicate *nothing*. Write *mountain range* under *the*. Then say *We did not add the before* Mt. Everest. *What type of geographical feature is Mt. Everest?* (a mountain) Say *Yes! It's a mountain. When we are talking about a single mountain, we do not add the.* Write *single mountain* in the other column.

- Repeat this instruction for the remaining sentences. Tell students to copy the chart in their notebooks. Point out exceptions to the rules: *the United States, the Netherlands* and *the Philippines* are countries that do take *the*.

Practise 1

- 1 Tell students to scan the timeline. Say *We're going to learn about female explorers. Do you know any of these names?*
- **Model** Say *Let's look at the sentence about Sacagawea. What are the two geographical features mentioned?* (a region, a country) *Look at the chart we made. Do we need to use* the *before the name of a region?* (yes) *That's right! Let's write* the *in the first blank.* Repeat with *United States*, but note it does not follow the rule for countries.
- Tell students to complete the remaining items independently, using their T-charts as a reference. Then ask students to identify the types of geographical features in the sentence.

Apply 2

- 2 Tell students to go to page 167 and remove the page. Then tell students to cut the page in half so that they get a list of the explorers' names. Tell students to place the other half of the paper face down. One by one, read the names aloud and ask students to talk about each explorer's contributions briefly.
- After you've reviewed all of the explorers, ask students to find a partner. Tell students to cut out one set of cards, mix them into a single pile and place them face down in rows. Students will take turns turning two cards over at a time. The goal is to match the explorer's name to his or her accomplishments.
- Once students make a match, remind them to scan the information card and identify place names that need *the*. Then they will describe the explorer's work using the words on the card. The player with the most matches at the end of the game wins.

Extend

- Divide the class into two teams for a geography quiz. Write at least 25 place names on separate pieces of card and put them in a bag. One student is the moderator with access to a world map. One team member selects a card and makes a correct sentence about the geography of that place. (*Puerto Rico is an island in the Caribbean.*) The moderator confirms the answer using the map. Teams can earn two points per turn: one for accurate use of *the* and another for correct geography.
- Hand out **Worksheet 4.5.5** to provide additional practice with the geographic use of *the*.

Consolidate

- Using the materials from the geography quiz, have a speed-drill to practise correct use of *the*. One student comes to the front of the class and pulls a card from the bag. The student reads the place name with or without *the* as appropriate.
- Say *Let's see how many correct answers (student) can get in 15 seconds.* Return all cards to the bag and play with a different student.

BE THE EXPERT

Grammar in Depth

In English, the article *the* appears before some geographical names or features but not all. *The* is used with the names of mountain ranges (the Himalayas), rivers (the Nile), oceans or seas (the Mediterranean), groups of islands (the Galápagos), regions (the Middle East) and points of the globe (the North Pole). *The* does not appear before most countries, cities, streets, individual mountains, continents and islands. When *the* does appear, it is generally not capitalised.

Teaching Tip

Always be prepared for your lessons. Even if the subject matter seems easy or familiar to you, review the text and your notes from previous lessons. Use the Internet to find new and different methods for teaching the subject. You might even want to join an online teachers' forum to ask others if they have ideas on how to teach a certain topic. Anticipate students' reactions to the lesson. For example, think about what questions students have had in previous lessons you've taught on the topic and plan answers to these questions. If students have struggled with the topic in the past, find a way to present the topic more clearly.

Formative Assessment

Can students

- use *the* correctly when talking about places?

Write the following places on the board and ask students to identify which ones require *the*: *Nile, Australia, Yellow Sea, Bahamas, Andes* and *Dubai*.

Workbook For additional practice, assign Workbook pages 52–53.

Online Workbook Grammar 2

WRITING

Objectives

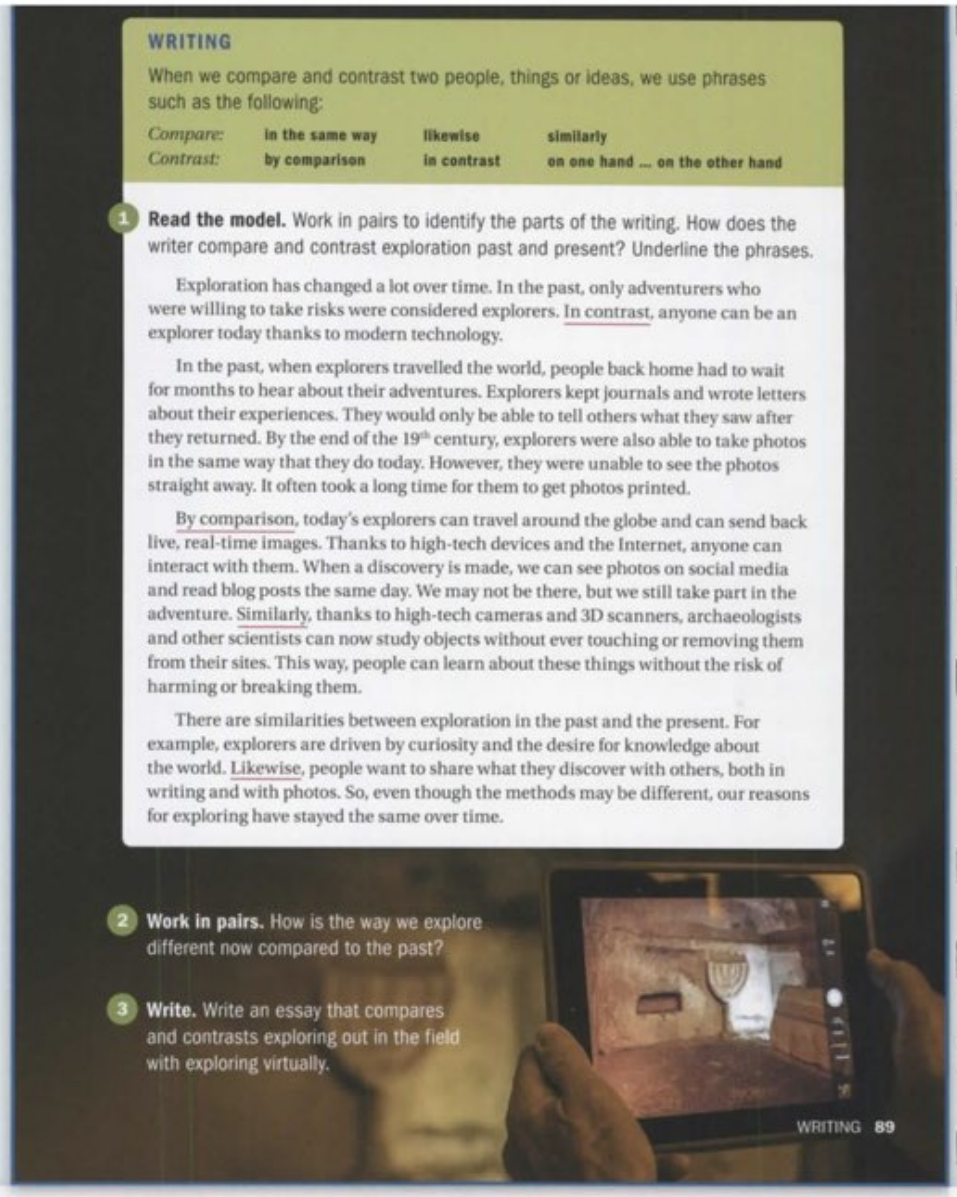
Students will

- identify elements of a compare-and-contrast essay.
- use expressions that connect ideas.
- analyse a model compare-and-contrast essay.
- write an essay that compares and contrasts exploring in the field and exploring virtually.

Academic Language *compare, contrast*

Content Vocabulary *blog post, journal*

Resources Online Workbook/Workbook page 54; Process Writing Worksheets 1–5; Genre Writing Worksheet: Compare/Contrast Essay; Graphic Organiser: Venn diagram (Teacher's Resource CD-ROM/Website); CPT: Writing



WRITING

When we compare and contrast two people, things or ideas, we use phrases such as the following:

Compare:	**in the same way**	**likewise**	**similarly**
Contrast:	**by comparison**	**in contrast**	**on one hand ... on the other hand**

1 **Read the model.** Work in pairs to identify the parts of the writing. How does the writer compare and contrast exploration past and present? Underline the phrases.

Exploration has changed a lot over time. In the past, only adventurers who were willing to take risks were considered explorers. In contrast, anyone can be an explorer today thanks to modern technology.

In the past, when explorers travelled the world, people back home had to wait for months to hear about their adventures. Explorers kept journals and wrote letters about their experiences. They would only be able to tell others what they saw after they returned. By the end of the 19th century, explorers were also able to take photos in the same way that they do today. However, they were unable to see the photos straight away. It often took a long time for them to get photos printed.

By comparison, today's explorers can travel around the globe and can send back live, real-time images. Thanks to high-tech devices and the Internet, anyone can interact with them. When a discovery is made, we can see photos on social media and read blog posts the same day. We may not be there, but we still take part in the adventure. Similarly, thanks to high-tech cameras and 3D scanners, archaeologists and other scientists can now study objects without ever touching or removing them from their sites. This way, people can learn about these things without the risk of harming or breaking them.

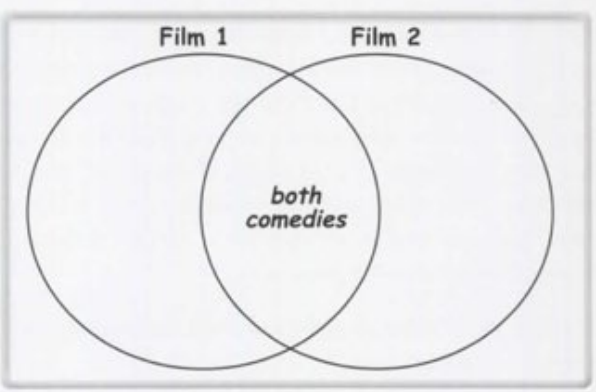
There are similarities between exploration in the past and the present. For example, explorers are driven by curiosity and the desire for knowledge about the world. Likewise, people want to share what they discover with others, both in writing and with photos. So, even though the methods may be different, our reasons for exploring have stayed the same over time.

2 **Work in pairs.** How is the way we explore different now compared to the past?

3 **Write.** Write an essay that compares and contrasts exploring out in the field with exploring virtually.

Warm Up

- **Activate prior knowledge** Say *In this lesson, we're going to write a compare-and-contrast essay. Let's review what it means to compare and what it means to contrast.* Ask a student to name a popular film. Then ask a different student to name a different film. Write the names of the two films on the board.
- Once the two films are written on the board, draw a Venn diagram beneath them. Say *Let's first compare the two films. Remember, when we compare, we think about what the things have in common. What is the same about them?* Students may say that an actor stars in both films or that they are both the same genre. Write their similarities in the overlapping area of the Venn diagram.



- Next, say *Now let's look at how to contrast the two films. When we contrast, we say what's different.* Tell students to provide information about what makes each film unique and write the information in the corresponding outer circle on the Venn diagram.

- Give pairs of students a copy of the Venn diagram graphic organiser and a category, such as food, sports, etc. Tell them to compare and contrast two things in that category. After a few moments, discuss their responses as a class.

Present

- Tell students to open their books at page 89. Direct them to the green box at the top of the page. Read aloud the text and the phrases that are useful for comparisons. Say *You just had a discussion in which you compared and contrasted two things. Let's use the new words to talk about your comparison.*

- Write the comparison terms on the board: *in the same way, likewise, similarly.* Then reference the Venn diagram from the Warm Up activity. Point to a comparison where the circles overlap. Model using the new phrases by saying *(First film) makes you laugh in the same way as (second film) does. (First film) has great actors. Likewise, (second film) also has excellent actors.* Ask several students to share some of the comparisons from their Venn diagrams using these new terms. Repeat the entire process to introduce and practise the three expressions for contrasting.

Read the Model 1 2

- Say *In a moment we're going to read a model of a compare-and-contrast essay. First, let's look at the photo.* Direct students to the photo. Ask *What is this person doing with the tablet?* (taking a photo) *What is this person exploring?* (a tomb, an ancient place)

- 1 Read the instructions aloud. Say *In this essay, the writer is comparing exploration past and present. After looking at the photo, you can probably think of one difference. Can you predict other ways the writer might compare and contrast exploration past and present?* Ask several students to respond. Then say *Now let's read the model. Remember to look for and underline phrases for comparing and contrasting as you read.* Read the model aloud once. Then ask several students to re-read each paragraph of the essay. Tell students to pause after each paragraph. Check that students underlined the correct words or phrases.

- 2 Give students another copy of the Venn diagram or tell them to draw their own. Tell students to write *Past* above one section, *Present* above the other. Say *Read the essay again silently. Write down what made exploration in the past different in the* Past *section. Do the same for the* Present *section.* Allow students several minutes to re-read the essay. After they have listed the differences and similarities mentioned in the essay, tell them to add any others that they know from their own experience.

- **Worksheet** If your students need a reminder of the elements of a compare-and-contrast essay, you may want to hand out the **Compare/Contrast Genre Writing Worksheet** and review it together.

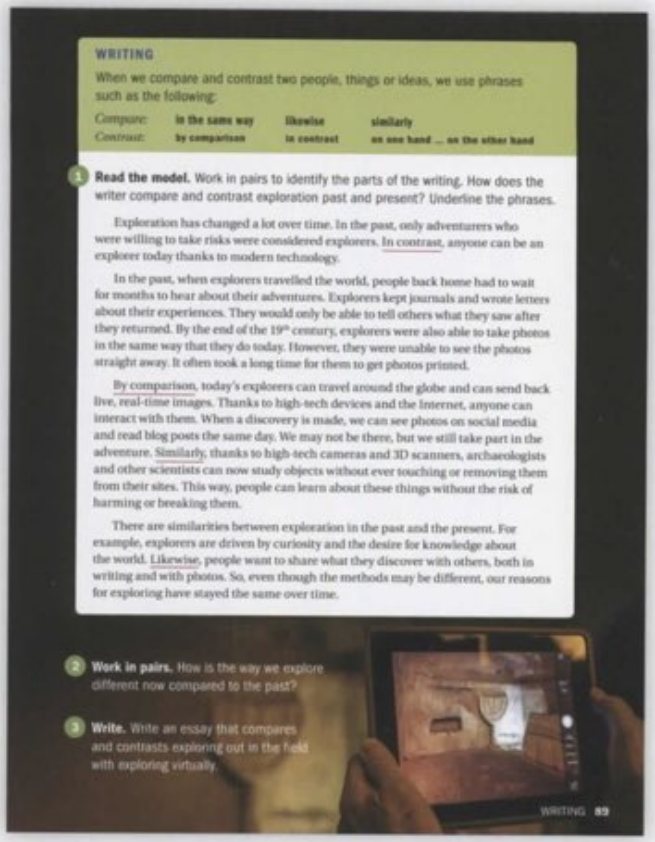
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Writing Support

Usage Point out to students that when they learn phrases that function as a unit, they do not need to make any changes to these phrases based on the rest of the sentence. For example, no matter what follows *On the one hand ... on the other hand,* that phrase will not change. These types of language chunks function as an idea and do not change even if the words within them can change when used individually (*i.e.,* hand, hands, hand's).

Workbook For scaffolded writing support, assign Workbook page 54.

Online Workbook Writing



WRITING

When we compare and contrast two people, things or ideas, we use phrases such as the following:

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2 **Work in pairs.** How is the way we explore different now compared to the past?

3 **Write.** Write an essay that compares and contrasts exploring out in the field with exploring virtually.

WRITING 89

Plan 3

- 3 Say *Think about the explorers you learnt about in this book. How do they explore?* (climbing, exploring caves, diving into the ocean) Make a list of responses and then ask *What have you learnt about virtual exploration? What tools can help people explore virtually?* Again, list students' responses. Then point to each of the tools on the list and ask *How is using this different from doing this?* Point to the type of exploration the explorers do as you end the question. Ask several students to provide responses.
- Tell students to take notes on the discussion and organise them into a Venn diagram. Then tell students to add any additional ideas they have. Remind students to consider things such as what drives exploration and what people discover by exploring as areas to compare.
- **Worksheets** If your students need a reminder of any of the steps of process writing, hand out **Process Writing Worksheets 1–5** and review them together.
- **Workbook** Refer students to Workbook page 54 to help them organise and plan their writing.

Write

- After students have finished their pre-writing, tell them to work on their first drafts. If you don't have enough time for students to complete the first draft in class, assign it as homework.

Revise

- After students finish their first drafts, remind them to review their writing for clarity and organisation. Remind students to consider the following: *Can I identify the two topics that are being compared and contrasted? Are the differences between the two topics clear? Are similarities mentioned? Are terms used to signal comparison and contrast? Are the ideas connected in a logical way? What needs more work?*

Edit and Proofread

- Remind students to consider elements of style, such as sentence variety, parallelism and word choice. Then remind them to proofread for mistakes in grammar, punctuation, capitalisation and spelling.

Publish

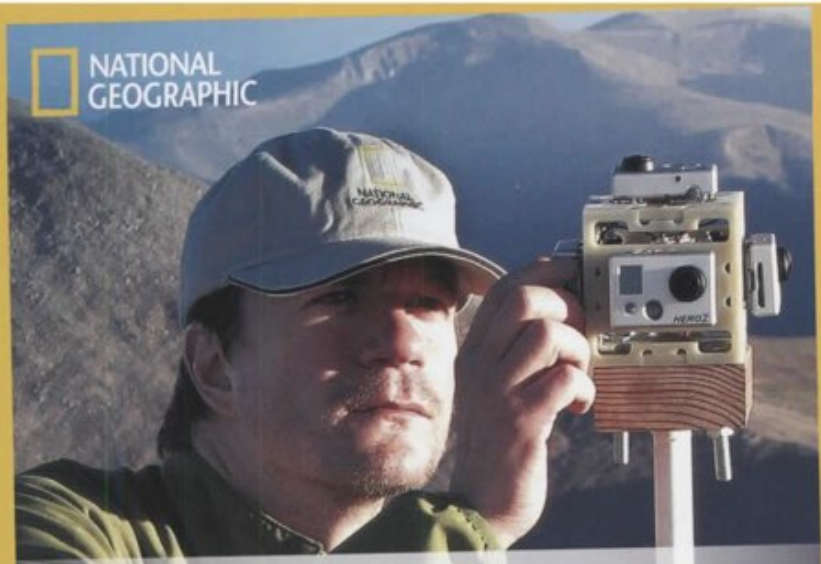
- Publishing includes handing in pieces of writing to the teacher, sharing work with classmates, adding pieces to a class book, displaying pieces on a classroom wall or in a hallway and posting on the Internet.

Writing Assessment

Use these guidelines to assess students' writing. You can add other aspects of their writing you'd like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

	1	2	3	4
Writing Ideas are clear and well organised, and student clearly compares and contrasts two topics.				
Grammar Student demonstrates understanding of the geographic use of *the*.				
Vocabulary Student uses a variety of word choices, including words used in this unit.				



Learn by Doing

'If you have curiosity, you have to be an explorer. You have to go out and find the answers yourself without waiting to get them from others.'

Corey Jaskolski
National Geographic Explorer, Engineer/Inventor

1. **Watch scene 5.2.**
2. How do you learn best – by listening to your teacher or by doing something for yourself? What are the advantages of each type of learning? Talk about a time when you learnt something new just by doing it.
3. When you go to a new place, what tools do you use to help you explore? What other tools could you use to learn about another place? Name two or three that you would like to have.

MISSION

Objectives
Students will
- identify how they learn best.
- make connections between learning and exploring.

Resources Video scene 5.2 (DVD/Website/CPT); Worksheet 4.5.6 (Teacher's Resource CD-ROM/Website); Online Workbook: Meet the Explorer; CPT: Mission

BE THE EXPERT

Teaching Tip

Learning by doing is fundamental in a language class. Students should be communicating in English for most of each lesson. This could be conversational pair or group practice, songs, games and other whole-class interactions. Teacher-led instruction should provide basic information and support but should not be the central focus of class time.

Online Workbook Meet the Explorer

Mission

- Write the word *learn* on the board. Then ask *What are you learning in this class? In your other classes?* Discuss as a class and make a list of students' responses. Ask *What are different ways that you can learn something new?* Ask several students to talk about how they learn. Now say *Open your books at page 90.* Ask a student to read aloud the mission. Say *Exploration is a way to learn by doing. Instead of only reading or listening to information, explorers go out and get information in different places.*

- Ask a student to read Corey Jaskolski's quote. Share a personal story with students about your own experiences with learning by doing. Say *Corey suggests that we go out and get answers. What things are you curious about? How can you get answers about these things yourself?* Ask several students to respond.

- **Activity 1** Say *Now let's watch a video about Corey Jaskolski.* Play **Video scene 5.2.**

- **Activity 2** Point out that students may have different learning styles for different skills. For example, they might learn English through conversation, but they may find individual practice is better for maths. Write a list of school subjects and other activities (music, sports) and ask students to determine how they learn different skills. Then tell them to discuss the question in pairs.

- **Activity 3** Tell students to consider the different tools that are found in their mobile gadgets, such as smartphones or tablets, in their discussion. Point out that the tools students discuss will vary depending on the places they talk about exploring.

- **Worksheet** Hand out **Worksheet 4.5.6**. Explain that students will use the worksheet to further discuss the connection between exploration and learning.

PROJECT

Objective
Students will
- choose and complete a project related to exploration.

Academic Language *biography, feature article, profile*

Content Vocabulary *itinerary*

Resources Assessment: Unit 5 Quiz; Workbook pages 55 and 94; Worksheet 4.5.7, Graphic Organiser: T-chart (Teacher's Resource CD-ROM/ Website); CPT: Make an Impact and Review Games

Materials poster board *(optional)*

Assessment Go to page 259.

Unit Review Assign Worksheet 4.5.7

Workbook Assign pages 55 and 94.

Online Workbook Now I can

Make an Impact

YOU DECIDE **Choose a project.**

1 Plan an expedition.
- Research where you will explore and what you hope to find.
- Plan your expedition. Create an itinerary with photos and a map showing where you plan to explore. Add as much detail as possible.
- Present your plan to the class.

2 Profile a well-known explorer.
- Research an explorer from the past or present.
- Prepare a biography of the explorer. Include information on where he/she has explored, what he/she has discovered, and his/her methods and tools.
- Create a poster or a computer-based presentation to share what you learnt.

3 Explore from home.
- Research different ways to explore without leaving your home.
- Identify advantages and disadvantages of virtual exploration.
- Write a feature article to describe ways for people to explore virtually. Use examples from your own experience.



Prepare

- **YOU DECIDE** Ask students to choose a project.
- **Activity 1** Explain what an *itinerary* is and provide an example of an itinerary from a travel brochure or website. Remind students that their expedition should be focused on exploring: it's not a holiday. Students can choose to research history, archaeology or a scientific discovery. Students can choose the format that they wish to use to present their work. Possible project formats include a computer-based presentation, a poster, a video or a brochure.
- **Activity 2** Refer students to the explorers featured in Activity 1 on page 88 for ideas on an explorer to profile. Point out that students do not need to feature an explorer from this unit. Remind students that biographies should include information about the person's life, background and professional contributions.
- **Activity 3** Encourage students to spend time experimenting with a variety of virtual exploration options. Guide students to websites that allow for virtual tours of caves, museums or outdoor areas. Provide students with a T-chart organiser to note the advantages and disadvantages as they work on virtual exploration. Students can then use the chart to organise their articles.

Share

- Schedule time for students to present their final projects to the class. If necessary, bring in a computer projector to show students' presentations.
- **Modify** To provide structure, provide a list of possible expeditions for Activity 1 and notable explorers for Activity 2. Students who choose Activity 3 may instead decide to do a video feature. If they work in pairs, they can do a role play between a reporter and a virtual explorer.

STUDENT'S BOOK AUDIO SCRIPT

Track 057 1 **Listen and read.** See Student's Book pages 78–79.

Track 058 2 **LEARN NEW WORDS** **curious** / Curious people make great discoveries. **drive** / The desire to learn new things drives people to keep exploring. **encounter** / Ocean explorers encounter a wide variety of life forms. **exciting** / It's exciting to be an explorer. **expert** / Corey Jaskolski is an expert camera builder. **high-tech** / High-tech tools help scientists explore without harming sites. **investigate** / New discoveries are made when we investigate unknown places. **knowledge** / Doctors must have a great deal of knowledge about the human body. **look into** / Scientists have looked into how humans evolve. **pioneer** / Astronauts are pioneers of space. **purpose** / What is the purpose of exploring the ocean floor? **remote** / We still haven't seen many remote parts of the ocean. **research** / Lee Berger researches early human beings.

Track 059 5 Explorer Sylvia Earle is a deep-sea pioneer with a long list of achievements. She has engaged in 7,000 hours of underwater study and written nearly 200 scientific articles on her findings. In 1970, she and a team of women 'aquanauts' were required to live underwater for weeks at a time to research marine life. The fact that so much of the ocean remains undiscovered has driven Sylvia's work. In fact, even though explorers have been studying the world's oceans for years, they've only seen about five per cent of them! Sylvia's purpose in life has been to protect the sea and she encourages others to do so as well.

Track 060 5 **LEARN NEW WORDS** **achievement** / Scientists are rewarded for their achievements with awards or honours. **encourage** / Exploring the Earth will encourage people to protect it. **engage in** / We learn about the world by engaging in exploration. **require** / Becoming an oceanographer requires a lot of training.

Track 061 **SPEAKING STRATEGY** See Student's Book page 81.

Track 062 1 **S1**: What's wrong, Kenji?

S2: Well, it's hard to explain. I have a chance to study abroad next year, but I'm not sure if I should go.

S1: Why not? Are you worried about missing school?

S2: Hmm, that's a good question. I guess I'm a little worried about that. It'll be my last year. I'll have a chance to play on the baseball team, and my family expects me to study hard for university. What do you think?

S1: Let me think about that for a minute. Your family wants you to go to university? Well you're a good student, and you've still got lots of time before you graduate. Besides, universities want students who've studied abroad. I don't think getting ready for university will be a problem.

S2: What about baseball?

S1: Yes, that's tough. Hey, maybe you could study in the US or Canada and see how they play baseball there!

S2: Hmm, I hadn't thought of that. Great idea!

Track 063 **GRAMMAR** See Student's Book page 82.

Track 064 1 Barrington Irving is one of the youngest people ever to fly around the world and the first African American to do so. How did he get his start? He had been preparing for a career in professional football, but his plans changed when he met a Jamaican pilot in his parents' bookstore. He became interested in becoming a pilot and started learning how to fly by using a forty-dollar flight video game. By graduation, he had been offered the chance to play football at several universities, but he turned them down. Instead, he focused on flying. He started washing aeroplanes to pay for flight school. After many hours of flight school and practice, his instructor said it was time to fly solo. Barrington wasn't sure if he was ready at first. He was nervous but he flew well and landed the plane with no problems. His hard work and determination had paid off!

Track 065 4 In 2007, at the age of only 23, Barrington Irving flew a plane around the world – a plane that he had a manufacturer build with donated parts. People had told him that he couldn't do it. But when the day came for him to leave, five thousand supporters had come to Miami Airport to wish him well.

Barrington's route included 27 stops in 13 countries. He flew for 97 days. He was in constant motion for hours at a time, through thunderstorms, monsoons, snowstorms and sandstorms. At times, he sang to himself to stay awake. Ultimately, he made it home. Barrington had set a record as the youngest person to fly around the globe solo. He was really excited! Barrington was now a respected pilot. But he also wanted to educate others. He started an organisation called Experience Aviation and had youngsters build a plane that he actually flew. His goal is to get more young people to see how maths and science can bring them a better future.

Track 066 4 **LEARN NEW WORDS** **educate** / Barrington works to educate young people about flying. **globe** / There are still many places on the globe left to explore. **motion** / Strong winds can affect the motion of an aeroplane. **route** / Barrington's route took him through extreme weather. **set a record** / Barrington set a record as the youngest person to fly around the world.

Track 067 2 **LEARN NEW WORDS** **associated** / Exploration is often associated with discovery and risk-taking. **gene** / Scientists are researching how our genes affect us. **motivate** / Curiosity motivates humans to explore. **trait** / Members of a family often share the same traits.

Track 068 3 **WHILE YOU READ** See Student's Book pages 84–85.

Track 069 **GRAMMAR** See Student's Book page 88.

In This Unit

Theme This unit explores giant plants and animals of the past and present.

Content Objectives
Students will
- identify and describe giant plants and animals of the past and present.
- read about how palaeontologist Nizar Ibrahim discovered *Spinosaurus*.

Language Objectives
Students will
- talk about giant plants and animals of the past and present.
- speculate about the past and the future.
- use relative clauses with *that, which, where, who* and *whose* to describe nouns.
- use reduced relative clauses.
- write a news report about a discovery from the past or present.

Vocabulary
pages 94–95 *ancient, catastrophe, develop, diameter, enormous, exception, extinction, frightening, heart, huge, jaw, prehistoric, stomach, weigh*
page 96 *carnivore, gigantic, herbivore, massive*
page 99 *era, fierce, prey on, times*
page 100 *advantage, extraordinary, significant, useless*
Vocabulary Strategies Synonyms and antonyms; Word parts

Speaking Strategy Speculating about the past and the future

Grammar
Grammar 1 Use relative clauses with *that, which, where, who* and *whose* to describe nouns
Grammar 2 Use reduced relative clauses

Reading *Discovering* Spinosaurus
Reading Strategy Make inferences

Video Scene 1: *Super Tree;* Scene 2: Meet Nizar Ibrahim

Writing News report

National Geographic Mission Make Big Plans

Project
- Animated action film
- 'Find the Fossil' game
- Presentation on a modern giant

Pronunciation Pausing: Relative clauses

Pacing Guides 4.6.1, 4.6.2, 4.6.3



Introduce the Unit

- **Build background** Give each student a blank piece of paper. Then say *Draw a picture of yourself standing near a tree. Be as accurate as possible.* Allow several minutes for students to sketch their pictures. Then hold up several examples of their work for the class. Each time, point out the relationship in size between the person and the tree.

- Say *Open your books at pages 92 and 93. Look at the men in the photo. Look at the tree in the photo. How does the size difference compare to your drawing?* (It's much greater.) *How can you describe this tree?* (very big, giant)

- Ask additional questions to encourage discussion of the photo:
  How many people can you see? (three)
  What are they doing? (studying/measuring the tree)
  When was this photo taken? (in the winter)
  How does the big tree compare to other trees in the background? (Its trunk and branches are much wider.)



A team of scientists measuring a giant sequoia in Sequoia National Park, California, USA

- Ask a student to read Question 1 on page 92 aloud. Ask *What's the relationship between a tree's size and its age?* (The older it is, the larger it is.) Ask students to guess how old the tree is and explain why they think that. Write down their guesses and keep them on a piece of paper. Point out that students will find out its exact age later in the unit when they watch a video about this tree.
- Encourage students to answer Question 2 based on their real-life experiences, not something they saw on TV or in a film.
- For Question 3, write the word *giant* on a word web on the board. As students tell you their thoughts, write their ideas on the word web. Then say *In this unit, we will be studying giants. We'll look at giant plants and animals from long ago and today.*

Extend

- Hand out **Worksheet 4.6.1**. Put students into pairs. Explain that partners will be writing about and discussing giant plants and animals.

UNIT OPENER

Objectives
Students will
- describe and discuss a photo.
- describe giant plants and animals that they have seen.

Resources Worksheet 4.6.1 (Teacher's Resource CD-ROM/Website); CPT: Unit Opener

BE THE EXPERT

About the Photo

This photo was taken in Sequoia National Park, located in the southern Sierra Nevada mountain range, in eastern California, USA. The park covers 1,634 km^2 (631 mi^2) of land and is home to the largest trees on Earth. The park sits at a high altitude and includes the highest point in the continental United States, Mt. Whitney, which is 4,418 m. (14,494 ft.) above sea level.

Teaching Tip

Materials It's important that students learn to be responsible for bringing to class their own materials, such as a notebook, pens and pencils. However, inevitably students will forget an item at some point. Create a lending system in which you give students three free passes to borrow any classroom materials that they may have forgotten. Before class, as students prepare, allow them to go to a lending station to help themselves to a sheet of paper, a pencil or a pen. In exchange, students must leave one of their passes. This system will reduce classroom interruptions caused by students asking you or other classmates for the necessary item.

Related Words

branch, trunk

VOCABULARY

Objectives
Students will
- identify and use vocabulary related to giant animals of the past.
- use new vocabulary to read about and discuss the size of dinosaurs such as *T. rex* and *Argentinosaurus*.

Target Vocabulary *ancient, catastrophe, develop, diameter, enormous, exception, extinction, frightening, heart, huge, jaw, prehistoric, stomach, weigh*

Content Vocabulary *beast, grapefruit, meteor, palaeontologist, pump, title*

Resources Graphic Organiser: Three-column table (Teacher's Resource CD-ROM/Website); Tracks 070–071 (Audio CD/Website/CPT); CPT: Vocabulary

Materials images of various species of dinosaurs and other prehistoric giants *(optional)*

1 Who were the giants of the past?
Discuss. Then listen and read. T 070

Let's go back, deep in time, to the land of the giants, when there were hundreds of species of dinosaurs on Earth. What were they like? And how did they go extinct? Many scientists believe that a major **catastrophe** – a meteor strike – destroyed these **enormous** beasts. Even though they've gone, their fossils can help us to understand what they were like.

Many people think that *Tyrannosaurus rex*, or *T. rex*, is the king of the **ancient** carnivores. It's *T. rex's* size that made this creature so **frightening** – it was **huge**! *T. rex* measured 4.5–6 m. (15–20 ft.) tall and 12 m. (40 ft.) long. Its eyes were the size of grapefruits; its **stomach** was 1 m. (3.3 ft.) in **diameter,** and it used its massive **jaws** to chew up to 230 kg. (500 lbs.) of meat in a single bite! *T. rex* had a **heart** the size of a refrigerator, which pumped all the blood through its giant body.

Although *T. rex* was really big, it wasn't the largest **prehistoric** creature ever discovered. That title belongs to *Argentinosaurus*, who measured 40 m. (130 ft.) long. This gigantic herbivore's bones were found in Patagonia, Argentina. Babies **weighed** only 5 kg. (11 lb.), but adults could weigh up to 70 tonnes. To reach full size, a young *Argentinosaurus* must have gained up to 5 kg. per day over 40 years, which made it one of the fastest-growing animals on Earth!



Warm Up

- **Activate prior knowledge** Say *The title of this unit is* Giants. *In the last lesson, we talked about what we thought of when we heard the word* giant. *How did you answer that question?* Allow time for students to review their notes from the lesson on pages 92–93 and then list their responses on the board. If students haven't included *dinosaurs* in the list, guide them to do so.

- Say *Dinosaurs are giants of the past. What do you know about dinosaurs? Work in a group to list as many dinosaur species and characteristics as possible.* Give students several minutes to make their lists. If possible, allow them to look up the names of different species that they may not be familiar with in English. Then ask them to share their responses with the class.

- Say *In this lesson, we're going to learn about the size of one of the most well-known dinosaurs:* T. rex. Hold up your book at pages 94–95 and ask students to put their hands up if they have heard of *T. rex*. Ask one or two students to share any information they can.

Present 1 2

- Say *Now open your books at pages 94 and 95. Look at the picture of* T. rex. *What do you think we'll learn about its size?* Tell students to scan the captions and make predictions.

- 1 Ask a student to read Activity 1 aloud. Discuss the answers as a class. You may want to help students identify other species of giant dinosaurs such as *Brachiosaurus* and *Diplodocus* by holding up images of these species and saying their names aloud. Point out other large animals of the past that aren't dinosaurs, such as mastodons and the megalodon. Again, show images of these creatures if possible.



Dinosaurs lived on Earth for around 165 million years – a lot longer than humans have. Some never completely disappeared: they just became much smaller. Eventually, they **developed** into the birds of today. Palaeontologists remind us that most species eventually face **extinction**, and humans may be no **exception** to that rule. But by studying how dinosaurs lived, we might just learn how to extend our own stay here on Earth well into the future.

2 **LEARN NEW WORDS** **Listen and repeat.** 071

3 **Work in pairs.** Think about the largest animals on Earth today. Research their sizes. How would they compare to *T. rex*? To *Argentinosaurus*?

BE THE EXPERT

About the Photo

The image is a rendering of *Tyrannosaurus rex*. The word *Tyrannosaurus* means *tyrant lizard*. *T. rex* lived in North America during the Cretaceous period (145–65 million years ago). This era is considered the last part of the age of the dinosaurs. *T. rex* became extinct 65 million years ago, during the Cretaceous-Tertiary mass extinction.

- Play **Track 070** and tell students to listen and read. Discuss the reading with students. Ask them to respond to the following:
  How do you compare in size with a T. rex? (Students are on average a third of the height of *T. rex*.)
  What is the difference in size between T. rex *and* Argentinosaurus? *In diet?* (*Argentinosaurus* is much bigger and is a herbivore; *T. rex* is a carnivore.)
  What do scientists believe might happen to humans? (They may go extinct.)
- 2 **LEARN NEW WORDS** Play **Track 071**. Tell students to listen and repeat. Then tell students to work in pairs to practise pronouncing the words together.
- Give students a copy of the Three-column table and tell them to write the following column heads: *Words that Describe Age*, *Words for Body Parts* and *Words that Describe Size*. Then tell students to work with a partner to categorise the new vocabulary words in the table. Check the tables as a class.
- Guide pairs to use the remaining vocabulary terms in sentences to talk about *T. rex* or *Argentinosaurus*.

Practise 3 4 5

- 3 Read the instructions aloud to students. Work as a class to brainstorm the largest animals that they can think of. Make a list on the board. Then tell students to choose an animal from the list and compare it in size to both *T. rex* and *Argentinosaurus*. For more accurate responses, tell students to research the size of the animal they chose for homework and bring the information to class the next day.
- To extend Activity 3, ask students to draw an outline of the animal they chose next to an outline of *T. rex* and *Argentinosaurus*. Students should use a ruler to help them draw the outlines to scale.

VOCABULARY

Objectives
Students will
- practise using vocabulary related to giant animals of the past.
- use a vocabulary strategy to learn new words.

Target Vocabulary *carnivore, gigantic, herbivore, massive*

Vocabulary Strategy Synonyms and antonyms

Academic Language *antonym, compare, synonym*

Content Vocabulary *aquatic, encounter, skilled, waterway*

Resources Online Workbook/Workbook pages 56–57; Tracks 072–073 (Audio CD/ Website/CPT); Worksheet 4.6.2 (Teacher's Resource CD-ROM/ Website/CPT); CPT: Vocabulary

Materials rulers *(optional)*

4 Read and write the words from the list. Make any necessary changes.

ancient	catastrophe	develop	extinction
frightening	huge	jaw	weigh

Nizar Ibrahim has always loved dinosaurs. As a student, he developed an interest in the work of a famous palaeontologist, Dr Ernst Stromer. One hundred years ago, Dr Stromer collected bones from the ancient sands of the Sahara Desert. About 100 million years ago, the Sahara Desert was a tropical waterway full of frightening predatory giants. Today, Nizar is continuing to learn about what lived in this region. He's most interested in Dr Stromer's discovery of *Spinosaurus*, a skilled hunter that could catch food in water and on land. *Spinosaurus* was huge – even bigger than *T. rex*. In fact, *Spinosaurus* had metre-long jaws that it used for catching fish and other aquatic creatures. Dr Stromer was the first to make significant discoveries about *Spinosaurus*, but Nizar has found more remains of this fascinating giant than anyone else to date.

5 LEARN NEW WORDS Listen for these words. Write *S* next to word pairs that are synonyms and *A* next to antonyms. Then listen and repeat. 072 073

carnivore	gigantic	herbivore	massive

A	1. carnivore	herbivore
A	2. massive	small
S	3. enormous	massive
A	4. tiny	gigantic
S	5. gigantic	huge
S	6. herbivore	plant-eater

6 YOU DECIDE Choose an activity.

1. **Work independently.** Make a poster about a dinosaur you hadn't heard of before. Describe its size, diet, habitat, when it lived and other characteristics.
2. **Work in pairs.** Research the dinosaurs that once lived in your region. Compare them with wild animals that live in this region today.
3. **Work in groups.** Talk about an encounter with a large animal you've had at a zoo or in the wild.


Nizar Ibrahim

- **4** Ask students to turn to page 96. Direct their attention to Activity 4. Ask a student to read aloud the words in the box. Then, as a class, review the meaning of each of the words. Point to the photo at the bottom of page 96 and say *This photo is of Nizar Ibrahim, a palaeontologist, with a dinosaur skeleton he studies. We're going to complete this paragraph to learn more about his work.* Tell students to scan the paragraph for unfamiliar words before beginning. After students complete the activity independently, ask a volunteer to read aloud the completed paragraph while others check their work.

- **Vocabulary strategy** Write on the board:

big	little
small	huge

- Say *Knowing a word's synonyms and antonyms can help us to understand the meanings of new words. Let's look at the words on the board. The first word is* big. *Let's find a word that's a synonym of, or that has the same meaning as, the word* big. Ask a student to come to the board and draw a line to the synonym. (huge) Say Big *and*

huge are synonyms: they have the same meaning. What other words on the board are synonyms? (small, little)

- Say *Now, let's find a word that's an antonym for the word* big. *Antonyms are words with opposite meanings.* Ask students to identify *small* and *little* as antonyms of *big*.

- 5 **LEARN NEW WORDS** Play **Track 072** once and tell students to note each of the new words they hear in the text. Use the context of the audio to discuss each word's meaning. Tell students to read the list of word pairs in Activity 5 and decide which pairs are synonyms and which are antonyms. Check their work as a class. Then play **Track 073** and tell students to repeat each word and sentence. When appropriate, pause the recording and ask an individual student to repeat the sentence again, this time including a synonym for the target word.

Apply 6

- 6 **YOU DECIDE** Ask students to choose a project. Then tell students to form pairs or groups if they choose the second or third activity options. Provide a list of lesser-known dinosaur species to help students who choose the first option.

- Encourage students who choose the second option to find out about at least two dinosaur species that lived in your region. If students have difficulty, allow them to focus on any large prehistoric animal to complete the activity.

- Allow students who chose the third option time to discuss their answers in groups. Then tell groups to choose the most exciting story they heard to share with the class.

Extend

- Tell students to work in groups to create a visual (such as a model or drawing) of a prehistoric giant in comparison to an average human of today. Tell students to label the creature using appropriate vocabulary words: *stomach, jaws, weigh, diameter, heart* and so on. Invite groups to present their visuals to the class.

- If time allows, hand out **Worksheet 4.6.2**. Explain that students will use vocabulary words to talk and write about giants of the past.

Consolidate

- Write the following words on the board: *broccoli, grapefruit* and *refrigerator.* Say *We saw these words used to describe* T. rex. *Write down what each word is referring to.* Allow students time to write their answers. Then check their work: *broccoli* (the size of its brain), *grapefruit* (its eyes) and *refrigerator* (its heart).

- Ask a student to make a sentence about the *T. rex*'s size, using these analogies. Model by saying T. rex *had massive eyes that were as big as grapefruits.* After each student creates a sentence, tell him/her to ask a classmate to re-state their sentence, exchanging one of the words with a synonym.

BE THE EXPERT

Vocabulary Strategy

Synonyms and antonyms Synonyms are words that have the same or similar meanings. Antonyms are words that have opposite meanings. Identifying synonyms can help speakers add variety to their vocabulary. Learning synonyms can also be easier than learning more detailed definitions for words. Synonyms are also very useful in writing, when using the same word can be repetitive. Antonyms are helpful in adding variety and emphasis. For example: *Let's just say that* T. rex *wasn't tiny.*

Model using a thesaurus so that students can quickly look up a word's synonyms and antonyms. Point out that most online dictionaries also list synonyms and antonyms as part of the entry.

Our World in Context

Professor Ernst Stromer was a German palaeontologist who led several expeditions into the Sahara between 1910 and 1914. Professor Stromer found significant remains of the aquatic dinosaur that he named *Spinosaurus*. Professor Stromer had the bones placed in a museum in Munich. During World War II, he tried to have them removed from the museum because of the threat of air strikes in Munich. The museum director, a Nazi who didn't like Professor Stromer's opposition to the Nazi regime, refused to let the bones be moved. In 1944, nearly all the fossils were lost in an Allied bombing that destroyed the museum. Only Professor Stromer's notes, drawings and photographs remained.

Formative Assessment

Can students

- identify and use vocabulary related to giant animals of the past?

  Ask *What three words can you use to describe* T. rex*?*

- use new vocabulary to read about and discuss the size of dinosaurs such as *T. rex* and *Argentinosaurus*?

  Ask *What are two differences between* T. rex *and* Argentinosaurus?

Workbook For additional practice, assign Workbook pages 56–57.

Online Workbook Vocabulary

SPEAKING STRATEGY

Objectives
Students will
- speculate about the past.
- speculate about the future.

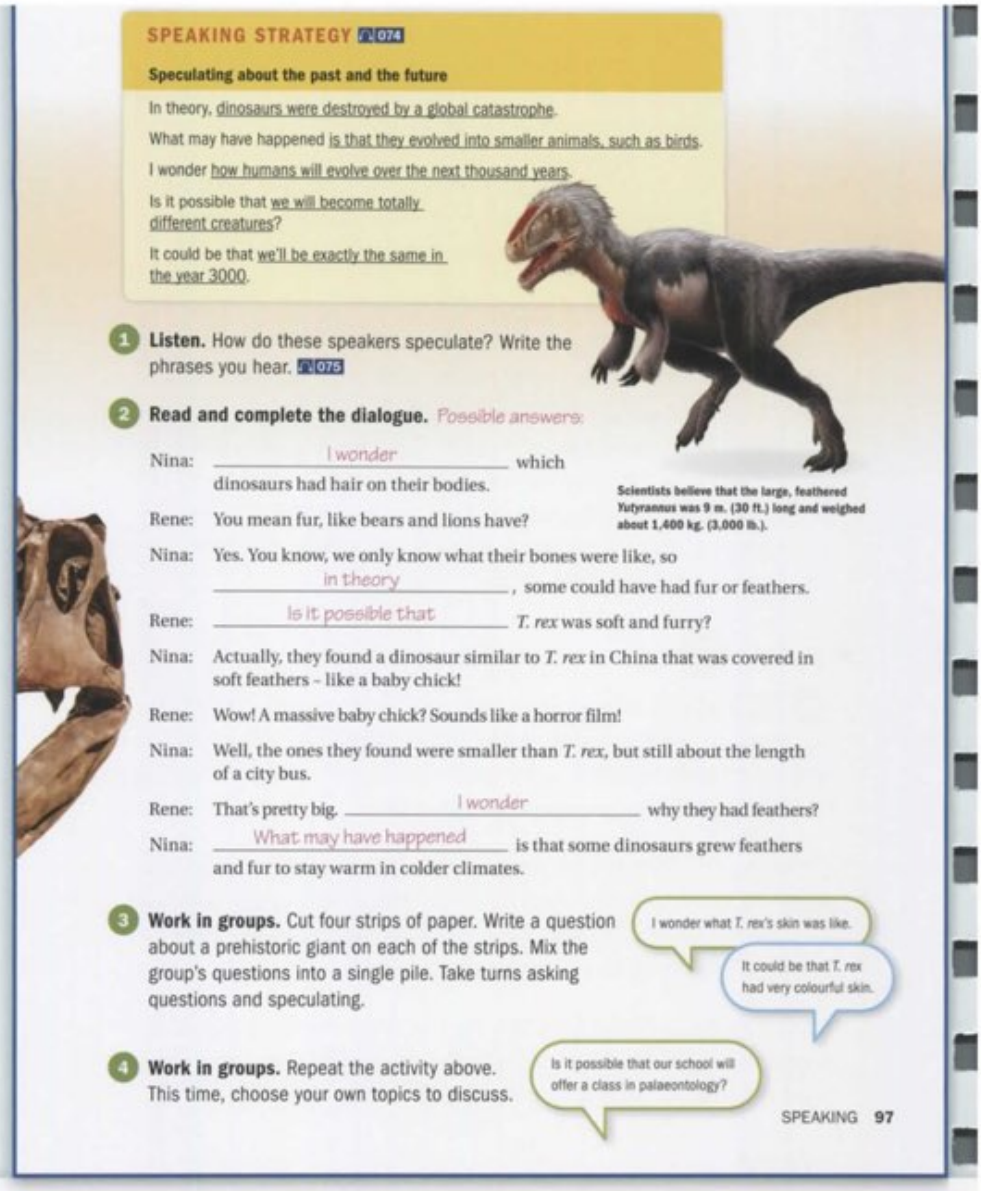
Speaking Strategy Speculating about the past and the future

Academic Language *speculate*

Content Vocabulary *chick, horror film, palaeontology*

Resources Online Workbook; Worksheet 4.6.3 (Teacher's Resource CD-ROM/ Website); Tracks 074–075 (Audio CD/ Website/CPT); CPT: Speaking Strategy

Materials photograph of a disaster scene (not graphic); pieces of paper



SPEAKING STRATEGY 074

Speculating about the past and the future

In theory, dinosaurs were destroyed by a global catastrophe.

What may have happened is that they evolved into smaller animals, such as birds.

I wonder how humans will evolve over the next thousand years.

Is it possible that we will become totally different creatures?

It could be that we'll be exactly the same in the year 3000.

Scientists believe that the large, feathered Yutyrannus was 9 m. (30 ft.) long and weighed about 1,400 kg. (3,000 lb.).

1 **Listen.** How do these speakers speculate? Write the phrases you hear. 075

2 **Read and complete the dialogue.** *Possible answers:*

Nina: _I wonder_ which dinosaurs had hair on their bodies.

Rene: You mean fur, like bears and lions have?

Nina: Yes. You know, we only know what their bones were like, so _in theory_, some could have had fur or feathers.

Rene: _Is it possible that_ *T. rex* was soft and furry?

Nina: Actually, they found a dinosaur similar to *T. rex* in China that was covered in soft feathers – like a baby chick!

Rene: Wow! A massive baby chick? Sounds like a horror film!

Nina: Well, the ones they found were smaller than *T. rex*, but still about the length of a city bus.

Rene: That's pretty big. _I wonder_ why they had feathers?

Nina: _What may have happened_ is that some dinosaurs grew feathers and fur to stay warm in colder climates.

3 **Work in groups.** Cut four strips of paper. Write a question about a prehistoric giant on each of the strips. Mix the group's questions into a single pile. Take turns asking questions and speculating.

I wonder what *T. rex*'s skin was like.

It could be that *T. rex* had very colourful skin.

4 **Work in groups.** Repeat the activity above. This time, choose your own topics to discuss.

Is it possible that our school will offer a class in palaeontology?

SPEAKING 97

Warm Up

- **Set the stage** Find and display a photograph that shows a scene that follows a disaster or another big event. Say *Look at the photograph. What do you think happened?* Ask students to share their ideas. As they share, re-phrase their answers using the Speaking Strategy phrases. For example, say *(Mario) says there must have (been an earthquake). What may have happened is that (all the people escaped from the building).* Use information from students' responses in your answers.

- Say *We are speculating or guessing, about what happened in the past. Now look at the photo again. What do you think will happen next?* Again, ask students to share their responses aloud. Model speculating about the future using students' responses and the phrases in the box. For example, say *I wonder (how long it will take to clean up).*

Present 1

- Tell students to open their books at page 97. Say *Listen as you read the phrases in the yellow box.* Play **Track 074**. Say *All of these phrases can be used to speculate about what happened in the past. Most of the phrases can be used to speculate about the future, too, except for the second one.* (What may have happened)

- 1 Say *Now, listen as two people have a conversation about why* Argentinosaurus *and other large sauropods went extinct.* Play **Track 075** once and tell students to just listen to the dialogue. Then play the track again and tell them to write the phrases for speculating.

Practise 2

- 2 Direct students' attention to the image on page 97. Say *This conversation is about* Yutyrannus. Ask one or two students to speculate about what they'll learn about this creature using the phrases from the box.

- Allow time for students to complete the activity independently. Ask a pair of students to read the completed dialogue aloud.

Apply 3 4

- 3 Divide students into groups of four. Tell each student in the group to tear a piece of paper into four pieces.
- Say *You're going to use your pieces of paper to create game cards to speculate about the prehistoric giants we've learnt about so far.* As a class, list information about these creatures' size, appearance, diet, habitat and activity.
- **Model** Draw a rectangle on the board. Say *Here's my first game card. I want to think of a question I have about* Stegosaurus. *I'd like to know what* Stegosaurus's *spikes felt like. Were they hard? Were they sharp?* Write on your 'game card': *What were* Stegosaurus's *spikes like?*
- Allow time for students to write questions. Encourage each group member to choose a different creature. Then tell them to combine their questions into a single pile.
- Think aloud to model speculating about the answer to the question on the board. Say *It could be that* Stegosaurus's *spikes were sharp. Is it possible that they were used to protect him?* Then guide students to play by taking turns selecting a card and discussing the question on it. Explain that, although they should make educated guesses, they do not need to provide accurate answers.
- 4 Tell students to repeat the process from Activity 3. This time, tell them to focus on speculating about the future. Guide them to do this by providing a list of upcoming events at school.

Extend

- Tell students to fold a piece of paper into four equal parts. Explain that students should draw three frames of a comic strip that features one of the giants of the unit. The fourth frame should be left blank.
- Tell students to exchange comic strips with a partner. The partner should study the drawings, think of a logical way to finish the story and then draw the final frame.
- When students finish, tell them to speculate about what happened in the comic based on their partner's beginning. Then tell them to speculate on what will happen using their own ending.
- If time allows, hand out **Worksheet 4.6.3**. Explain that students will use the worksheet to speculate about the past and the future.

Consolidate

- Ask students to cover their eyes. Then do something to make a loud or unusual noise, such as dropping a lot of books on the floor. Ask several students to speculate about what may have happened using the phrases they practised in the lesson.

BE THE EXPERT

Strategy in Depth

Students may already be familiar with speculating about the present using modals such as *might* and *could*. They are also able to speculate about the past with modals: *might have, must have* and *could have*.

Additional phrases that are useful for speculating include:
It's likely/unlikely that ...
My guess is that ...
I imagine that ...
It seems to me that ...
Chances are, ...

Formative Assessment

Can students
- speculate about the past?

  Ask *Why do you think* Argentinosaurus *went extinct?*
- speculate about the future?

  Ask *What animal will go extinct soon? Why?*

Online Workbook Speaking Strategy

GRAMMAR 1

Objectives
Students will
- use relative clauses with *that, which, where, who* and *whose* to describe nouns.
- use relative clauses to talk about present and past giants of the sea.
- identify and use new words related to megalodon.

Grammar Relative clauses: Defining and describing

Target Vocabulary *era, fierce, prey on, times*

Academic Language *clause, cross out, relative*

Content Vocabulary *distant, documentary, reality, scare off*

Pronunciation Pausing: Relative clauses

Resources Online Workbook/Workbook pages 58–59; Tracks 076–078, 125–127 (Audio CD/Website/CPT); Pronunciation Answer Key (Teacher's Resource CD-ROM/Website); CPT: Grammar 1 and Pronunciation

Materials two of the same objects, with different characteristics

Answer Key 2

Students should cross out: *which is considered the fiercest predator of the seas, which measures 4.5–6m. (15–20 ft.)* and *whose job it is to study shark attacks.*

GRAMMAR 076

Relative clauses: Defining and describing

I learnt about megalodon in a documentary **that/which** was very informative. It had enormous teeth **that/which** were as sharp as knives.

Megalodon, **which** was a fierce predator, was able to catch the largest whales.

Scientists **who/that** study sharks believe that megalodon is a distant cousin of the modern great white shark.

Scientists such as Catalina Pimiento, **who** researches sharks, have studied reasons for megalodon's extinction.

The ocean **where/in which** megalodon swam was much warmer than the ocean is today.

Megalodon, **whose** name comes from the Greek *giant tooth*, had enormous jaws.

1 Read. Complete the sentences below with *that, which, where, who* or *whose*.

Many people today fear the great white shark, ___which___ is considered the fiercest predator of the seas. The great white's enormous size is enough to scare off anybody ___who___ comes near it. This carnivore, ___which___ measures 4.5–6 m. (15–20 ft.), is often believed to prey on humans. In fact, researchers, ___whose___ job it is to study shark attacks, have determined that the species is responsible for between one-third and one-half of all shark attacks. But the idea ___that___ the great white seeks out humans who swim in the waters ___where___ it lives isn't based in reality. Although we're talking about a shark ___that___ is known for biting, the great white is really just a curious animal. When it sees a human ___who___ crosses its path, the shark will most likely bite and then release the victim. The fact ___that___ the great white could bite just because it's curious isn't very comforting. The only good news is that the great white shark, while enormous, is much closer in size to us than its distant cousin, megalodon, a creature ___which___ was more than double (maybe triple!) its size.

2 Work in pairs. Look at Activity 1 again. Cross out any relative clauses that can be removed from the paragraph.



98 GRAMMAR

Warm Up

- **Build background** Display any two objects that are the same, with some slight differences. For example, you might display two books: a small dictionary and a large science book.
- Tell students to study the two objects. Then describe each one using a relative clause. For example, hold up the dictionary and say *The dictionary, which can be used to learn new words, is very helpful.* Then hold up the science book and say *The science book that is in my hands belongs to (science teacher).*
- Continue to describe each item using relative clauses. Say one sentence and then ask a student to point to the item you're describing. Example sentences include: *This book, which can fit in your pocket, is good for English lessons. This is the book with which we learn about living things. Students who need to learn vocabulary use this book. The shelf where this book usually sits is in the science lab.*
- Say *I just described these objects. For each sentence, you identified the object I was talking about. But I never used any adjectives or describing words. Instead, I used phrases such as* (which can fit

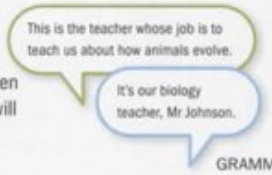
3 **LEARN NEW WORDS** **Listen to the information about megalodon.** Then listen and repeat. Track 077 078



4 **Read and write.** Combine the sentences into one. Use *that, which, where, who* and *whose*. Possible answers:

1. Megalodon was a fierce predator. It was almost three times the size of *T. rex*.
   Megalodon, which was a fierce predator, was almost three times the size of *T. rex*.
2. Megalodon was known for its massive teeth. Its teeth were 18 cm. (7 in.) long.
   Megalodon was known for its massive teeth that were 18 cm. long.
3. Megalodon had three rows of teeth. Its teeth were as sharp as knives.
   Megalodon had three rows of huge teeth that were as sharp as knives.
4. Megalodon and whales swam in oceans around the world. Researchers find their remains together in the oceans.
   Researchers find megalodon and whale remains together in oceans where they swam.
5. Megalodon lived during the Miocene era. The Miocene era began about 23 million years ago.
   Megalodon lived during the Miocene era, which began about 23 million years ago.
6. Some scientists look for reasons why megalodon went extinct. Their job is to study megalodon.
   Scientists, whose job is to study megalodon, look for reasons why it went extinct.

5 **Work in groups.** Choose your own topic and write three clues about it on a piece of paper. Use *that, which, where, who* and *whose* in your sentences. Then read your clue aloud to your group members, who will guess what you're talking about.



in your pocket). *These phrases are called* relative clauses. *In this lesson, we're going to learn how to define and describe nouns using relative clauses.*

Present

- Tell students to open their books at pages 98–99. Say *In today's lesson, we're learning how to define and describe nouns using relative clauses. Each relative clause begins with a relative pronoun.* Tell students to scan the Grammar box at the top of page 98 to identify the relative pronouns they see. (*that, which, who, where, whose*) List these words on the board.

- Play **Track 076** once and tell students to listen to the examples. Play **Track 076** again. Pause it after the first example sentence and say *In this sentence, we hear the phrase* that was very informative. Ask *What is this phrase, the relative clause, describing?* (a documentary) *What pronoun is used to introduce the relative clause?* (*that* or *which*) Continue to play **Track 076**, pausing after each example sentence to ask students to identify the relative pronoun and what the relative clause is describing.

BE THE EXPERT

Grammar in Depth

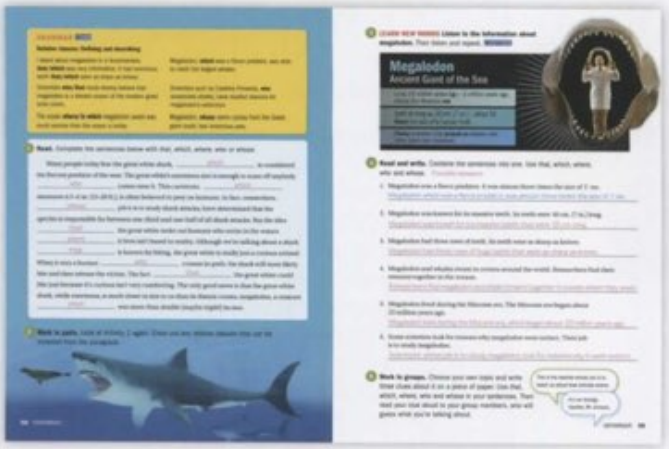
Relative clauses are dependent clauses, which means they cannot stand alone. They are used to describe nouns. There are two types of relative clauses: defining and non-defining. A defining relative clause contains necessary information and cannot be eliminated from the sentence. A non-defining relative clause provides additional detail in the sentence. It can be eliminated and that sentence would still make sense without it.

Relative clauses begin with *that, which, where, who, whose* and *whom*. In defining clauses, *that* can be used for people. For example: *People who/that swim in the sea risk shark bites.* The word *which* is not very commonly used in defining clauses. In the first example on page 98, the speaker would most likely use *that* for both cases, though either option is technically correct. In general, *which* is used to begin a defining clause in definitions and academic contexts.

The relative pronoun *whom* is not included in the Student's Book because nowadays it's used infrequently in English. *Whom* is typically used in formal contexts, often in writing. For example: *Dr Smith is the researcher to whom the letter is addressed.*

Teaching Tip

Although understanding grammar is key to learning another language, many students find grammar lessons to be difficult and/or boring. Do your best to liven up grammar lessons. Prepare jokes or humorous stories that model the target grammar point. Find current stories about students' favourite celebrities and use them to demonstrate the grammar point. You may even want to create fictional stories about students and teachers in the school that model the grammar point. Delivering the lesson in a more entertaining way can engage students more, making the grammar lesson more interesting and accessible for them.



- **Explain** Say *There are two types of relative clauses: one that defines the noun and one that just provides additional information.* Write the following sentences on the board:

> The scientists who are working on this project know a lot about sharks.
>
> The scientists, who are very intelligent, know a lot about sharks.

- Point to the first sentence and say *In this sentence, the relative clause* who are working on this project *defines or says exactly which scientists we're talking about. This information is essential to the meaning of the sentence.*

- Next, point to the second sentence and ask *What is the relative clause in this sentence?* (who are very intelligent) Say *In this sentence, the relative clause gives a little more information about the scientists, but it doesn't define the group of scientists that we're talking about. It's additional information and it isn't necessary to include.*

- Tell students to review the examples in the yellow box at the top of page 98 and say if the information in the relative clause is essential to the meaning of the sentence or if it's additional information. Discuss their responses as a class.

Practise 1 2

- 1 Tell students to scan the activity. Say *In this activity, we're learning about the great white shark. What can you tell me about the great white shark?* Listen to students' responses. Then re-phrase some of their responses using relative clauses. For example, if a student says that the shark bites, say *The great white is a shark that is known for biting.*

- Ask students to complete the paragraph independently. Ask a student to read the completed paragraph aloud as others check their answers. Point out items that have more than one possible answer.

- 2 Remind students that sometimes relative clauses are necessary for understanding the sentence but other times they aren't necessary. Review the examples from the yellow box to show the difference. To give additional support, point out that students are looking for three clauses to cross out.

- Tell students to compare their answers in pairs. Check their responses with the Answer Key on page 180.

Apply 3 4 5

- 3 **LEARN NEW WORDS** Say *In Activity 1, we learnt about the great white shark, which is a big animal. Remember, we're learning about giants in this unit. What is the name of the great white's ancient giant relative?* (megalodon) *That's right! Now, let's learn exactly how big megalodon was.*

- Play **Track 077** and tell students to follow along. Tell students to take notes on the size of megalodon as they listen. Then ask individual students to read the information at the top of page 99 aloud. Point to the photo and say *This man is holding the jaws of a great white shark in his hands. He is standing behind the jaws of a megalodon.* Guide students to comment on the size difference between the two sea animals and between the animals and the human.

- Say *Let's listen to the new words. After each word and sentence, repeat what you hear.* Play **Track 078** and ask students to repeat each new word and sentence.

- 4 Say *In this activity, you'll see two sentences in each item. You must combine these two sentences into a single sentence using relative clauses.* Ask a student to read the instructions and the first set of sentences aloud. Ask another student to read the combined model sentence aloud.

- **Explain** In the model, students see one way to combine two sentences into a single sentence using a relative clause. Say *There may be more than one way to combine these sentences using relative clauses.* Give an additional example for the first item: *Megalodon, which was almost three times the size of* T. rex, *was a fierce predator.*

- Tell students to complete the activity independently, then compare their responses with a partner. Walk around to give feedback and additional instruction as necessary. Ask students to share their sentences with the class.
- 5 Divide students into groups of three or four to do this activity. To provide structure and context, work as a class to brainstorm a list of topics before students begin the activity.

Extend

- Tell students to create and play a game of *I Spy*. Working independently, students should write clues for at least five objects or people in the classroom. Each clue should include a relative clause that describes the object or person without naming it. Provide examples of clues, such as: *I spy an object that is shaped like a rectangle. I spy a person whose book bag is open.* Remind students to be sensitive and respectful if they're writing a clue about another person.
- Once students have written their clues, tell them to work in groups of three or four. Students should take turns reading their clues aloud to the group. Group members will take turns trying to guess the object. If they aren't able to guess, they can ask for an additional clue.
- Each correct guess earns the group member a point. After all of the clues have been given, the person with the most points in each group wins.

Consolidate

- Assign each student a relative pronoun: *that, which, where, who* or *whose*. Tell students to write only a relative clause that begins with their pronoun on a piece of paper. Students can use any topic. Give examples such as *who sits next to me in maths* or *which is really boring.*
- Collect the pieces of paper and place them in a pile in front of the class. Ask a student to come to the front, select a piece of paper from the pile and create a sentence using that relative clause in under ten seconds. Encourage students to be creative and humorous, while still being respectful. Repeat this with other students for as long as time allows.

BE THE EXPERT

About the Photo

The man in the photo on page 99 is Dr Jeremiah Clifford, a specialist in fossil reconstruction. He's holding the jaws of a great white shark and is standing inside of the reconstructed jaws of a megalodon. Studies show that the megalodon had the most powerful jaws of any creature that ever lived, including *T. rex* and the great white shark.

Pronunciation

Go to Student's Book page 146. Use Audio Tracks 125–127.

Pausing: Relative clauses Defining and non-defining relative clauses differ in punctuation. The commas in non-defining relative clauses indicate pauses before and after the clause.

The humpback,/ ***which is my favourite whale,/*** *lives in all oceans.*

Because a defining relative clause is necessary for the sentence to be clear, there's no pause after the noun that it modifies. However, there may be a slight pause after the clause because it probably ends a single thought.

The whale ***that's in the film*** */ is a humpback.*

Formative Assessment

Can students

- use relative clauses with *that, which, where, who* and *whose* to describe nouns?

  Ask students to use *whose* in a sentence.
- use relative clauses to talk about present and past giants of the sea?

  Ask students to complete these sentences:

  The great white shark, which _____, is very large.

  Scientists who _____ believe that the great white shark is a distant cousin of megalodon.
- identify and use new words related to megalodon?

  Say *Describe megalodon. Say when it lived, what it ate and what it looked like.*

Workbook For additional practice, assign Workbook pages 58–59.

Online Workbook Grammar 1

READING

Objectives
Students will
- read about the discovery of *Spinosaurus*.
- identify and use new words from the reading.
- make inferences about the reading.

Reading Strategy Make inferences

Target Vocabulary *advantage, extraordinary, significant, useless*

Vocabulary Strategy Word parts

Content Vocabulary *cardboard, colleague, CT-scanning, dense, hind, missing link, paddle*

Resources Online Workbook/Workbook pages 60–61; Worksheet 4.6.4 (Teacher's Resource CD-ROM/ Website); Tracks 079–080 (Audio CD/ Website/CPT); CPT: Reading

Materials a paper bag

1 **BEFORE YOU READ** **Discuss in pairs.** You've been learning about dinosaurs in this unit. Look at the image below. What's different about the dinosaur you'll read about?

2 **LEARN NEW WORDS** **Find these words in the reading.** What do you think they mean? Notice the word parts and think about what each part means. Then listen and repeat. 079

advantage	extraordinary
significant	useless

3 **WHILE YOU READ** **Think about how Nizar must have felt about finding *Spinosaurus* remains.** 080



DISCOVERING *Spinosaurus*

How one determined palaeontologist found a river monster in the Sahara

Nizar Ibrahim has always been fascinated by dinosaurs. And he's always enjoyed travelling to faraway places. As a palaeontologist, he's able to do both. Nizar has spent a lot of time in the Kem Kem, a region in the Sahara Desert along the border of Morocco and Algeria. This region is hot and dry now, but it was once home to a large river where amazing creatures lived: car-sized fish, several different types of crocodile-like creatures and a large, predatory dinosaur called *Spinosaurus*.

Spinosaurus, which lived in North Africa about 97 million years ago, was an extraordinary creature. It was enormous, with a length of up to 15 m. (50 ft.). It had massive jaws like a crocodile, which were an advantage when catching prey. Nizar knew about some of these characteristics from research that had been done on the *Spinosaurus* in the early 1900s by German palaeontologist Ernst Stromer. Nizar and his colleagues used Professor Stromer's notes and sketches, the fossils he had found and CT-scanning technology to piece together a whole *Spinosaurus* skeleton – a digital dinosaur.

What Nizar and his team learnt was significant: *Spinosaurus* had dense bones, feet like paddles and small hind limbs. All of these were characteristic of animals that spent a lot of

Warm Up

- **Revisit** Say *We've already met this unit's explorer, Nizar Ibrahim. What can you tell me about him?* (He's a palaeontologist. He made discoveries about *Spinosaurus*.)
- Say *We're going to read about how Nizar finds a* Spinosaurus *skeleton. What do you think some of the challenges he faced were? Think about what you already learnt about his discovery. Then make a list.* Give students several moments to list their ideas. Then tell them to discuss their ideas in a small group.
- Make an idea web on the board. Write *Challenges* in the middle of the web. Then ask students to share their ideas. Use their ideas to complete the web.



time in the water. 'We realised that we were dealing with a river monster,' said Nizar. 'A predatory dinosaur bigger than *T. rex*, the ruler of this ancient river of giants.'

Perhaps the only thing more amazing than the creature itself is how Nizar was able to find its skeleton. In 2008, a local man from Erfoud, Morocco, gave Nizar a cardboard box filled with some fossils. A little while later, Italian colleagues contacted Nizar about fossils they received that were extremely similar to the ones he was given. Nizar wanted to find where the fossils came from. If only Nizar could find the man from Erfoud! Nizar didn't even know the man's name. He only had a mental image of a man with a moustache, which wasn't very helpful. Nizar travelled to Morocco anyway, to try to find him. After a long, unsuccessful search, Nizar gave up hope. He was sitting at an outdoor café, drinking tea with a colleague, talking about how it was useless: he would never piece together *Spinosaurus*. Suddenly, he looked up and saw the man walking down the street. He had found the missing link! The fossil hunter took Nizar to the site, and he was finally able to locate the remaining bones for his *Spinosaurus* skeleton.



Nizar and his team looking for fossils in the Sahara

4 AFTER YOU READ Work in pairs to decide if each sentence is *true* or *false*. Tick the correct answer.

1. The Kem Kem region has a large river running through it. (T) (F)
2. Nizar was the first scientist to discover *Spinosaurus*. (T) (F)
3. *Spinosaurus* was larger than *T. rex*. (T) (F)
4. The only thing that really helped Nizar understand *Spinosaurus* was the CT-scanning technology. (T) (F)
5. Dense bones, feet like paddles and small hind limbs are characteristics of animals that spend time in the water. (T) (F)
6. The man in Morocco gave Nizar all of *Spinosaurus's* bones in a cardboard box. (T) (F)

5 Work independently. Imagine you're Nizar. Write a journal entry about finding the *Spinosaurus* bones. How does the discovery make you feel? Why?

6 Discuss in groups.

1. What are the advantages of studying dinosaurs? What are the challenges facing palaeontologists? Is it worth it to study dinosaurs? Why or why not?
2. What personality traits does Nizar have that helped him to find *Spinosaurus*? Do you have any of these traits? How do you use them?
3. Nizar uses new technology, combined with fossils and old documents, to understand *Spinosaurus*. Name another way that new technology can be used to help people understand something very old.

Before You Read 1 2

- Tell students to open their books at pages 100–101. Say *We've talked about how Nizar found* Spinosaurus. *Now, look at the images. In the large photo, we see Nizar's team working on the discovery. Look at the smaller image. This shows what* Spinosaurus *may have looked like.* Ask *What do you think is unusual about the smaller image in relation to the photo?* (*Spinosaurus* is shown in water, but they're researching it in the desert.)
- 1 Ask a student to read the instructions aloud and then tell students to discuss the question in pairs. Students may include differences in appearance, size and habitat in their answers.
- 2 **LEARN NEW WORDS** Say *We're going to look at some new words that will help us understand how Nizar made this discovery.* Say the first word aloud: *advantage*. Tell students to repeat the word. Then tell them to scan the reading to look for the word. Repeat this with the other words.

BE THE EXPERT

Strategy in Depth

Make inferences An *inference* is an idea or a conclusion that is formed using background knowledge as well as knowledge of a text or situation. An inference requires students to fill in information that may not have been directly stated in the text itself. Making inferences is helpful for reading comprehension because it requires critical thinking about the text. Students must connect information from the text with their own experiences and knowledge in order to make a solid inference.

After students make inferences, it's useful that they discuss their ideas with others and then determine if their inference was accurate or not. If students make inferences that seem inaccurate, work with them to discuss how they came to infer the idea, why it may not align with the text and how they can change their thinking in the future.

Vocabulary Strategy

Word parts Many of the vocabulary words that students at this level are learning have more than one part. Words can be compound words or they may carry an affix – a prefix or a suffix. Students are continuously learning the meaning of different affixes as they acquire new vocabulary. Point out that they should apply this knowledge to new words. When students are faced with a list of new words, they should identify any familiar word parts and then think about each part's meaning to better understand the meaning of the new term.



- **Vocabulary strategy** Explain how knowing word parts can help to clarify a word's meaning. Write the word *useless* on the board. Say *Look at this word. It can be divided into two parts. What are they?* (use, less) *That's right! Now let's think about the meaning. Something's use is its purpose. And the suffix -less means without. So, something that's useless is without use or purpose.* Repeat this instruction with the word *extraordinary*.

- Play **Track 079**. Tell students to listen and repeat each word and sentence.

While You Read 3

- 3 Say *Now we're going to read to learn more about Spinosaurus and why it was such an amazing discovery.* Play **Track 080** and tell students to follow along.

- Say *Let's listen to this reading again. This time, imagine you're Nizar.* Ask *How do you feel when you're having tea in the café? How do these feelings change when you see the man you've been looking for?* Play **Track 080** again and pause in appropriate places for students to take notes. Remind students that they can make inferences on Nizar's feelings using what they know about him and his work, as well as their own feelings and experiences.

After You Read 4 5 6

- 4 Read the instructions aloud and then ask a student to read the first sentence aloud. Give students time to mark their answers. Repeat this by asking different students read the remaining sentences aloud. When students finish, review their work as a class. Ask students to say if each sentence is *true* or *false* and ask them to point out the spot in the text that helped them determine their answer. Discuss reasons for false statements and ask students to provide information that would make them true.

- 5 Read the instructions aloud. Say *To write the journal entry, you have to imagine that you're Nizar. Think about it: You've spent a lot of time searching for something that's very important to you. Your whole life's work deals with this finding and you can't find what you're looking for.*

- Gesture towards students and say *Now, think about your own life. Think about a time when you've spent a lot of time searching for something that was really important to you.* Give students time to think, and then ask *What was it? Why was it important? Did you ever find it? If so, how did finding it make you feel? Tell a story to your partner.* Allow time for students to share stories in pairs. Then invite several volunteers to tell their stories to the class.

- Say *You've discussed your own experiences about searching for something important and then finding it. Now use what you've learnt about Nizar's story and your own experiences, to write a journal entry as though you were Nizar.* Give students time to write at least a paragraph. Then tell them to share their work in small groups.

- 6 Divide students into small groups to discuss the questions. Refer students to the discussion from the Warm Up on the challenges facing palaeontologists. Remind them to include information from that discussion as well as any additional challenges mentioned in the reading.

Extend

- Divide students into small groups. Tell them to write a sketch about Nizar's experience in finding the *Spinosaurus* bones. Students can play the roles of Nizar, the Moroccan man and Nizar's colleague.
- Give students time to rehearse their sketches in class. If time allows, ask them to act their sketches out in class. Or tell students to film their sketches and post them on a class website or social media page.
- **Worksheet** If time allows, hand out **Worksheet 4.6.4** in class. Remind students to review the new words presented on page 100.

Consolidate

- Write each of the following names and phrases on separate pieces of paper: *Nizar Ibrahim,* Spinosaurus, *Kem Kem, Ernst Stromer, river monster, man from Erfoud* and *Italian colleagues.* Fold each piece of paper and place them all into a paper bag.
- Ask a student to select a piece of paper from the bag and read the name or phrase aloud. Then give students 20 seconds to write a sentence related to the reading using the word(s) on the paper. Repeat this as time allows. Collect students' sentences at the end of class and award points for correct information.

Teaching Tip

Students may acquire vocabulary more easily if they are more familiar with word parts. Compile a list of common affixes that students have been encountering throughout the course and create a bulletin board display of the affixes and their meanings for students' quick reference. Displaying such information in the room where all students can see it will help students to make quick reference to this information as they work on a reading or activity.

Formative Assessment

Can students

- read about the discovery of *Spinosaurus*?

  Ask *Why did Nizar give up hope in his search for* Spinosaurus? *What happened next?*
- identify and use new words from the reading?

  Ask students to match the vocabulary words to each of the following synonyms: *meaningful, special, benefit* and *worthless.*
- make inferences about the reading?

  Ask *How do you think finding the* Spinosaurus *skeleton made Nizar feel?*

Workbook For additional practice, assign Workbook pages 60–61.

Online Workbook Reading

VIDEO

Objectives
Students will
- identify and describe the President.
- explain the process of photographing the President.
- use a timeline to understand how long the President has been growing.

Academic Language *comment, comparison, predict, represent, timeline*

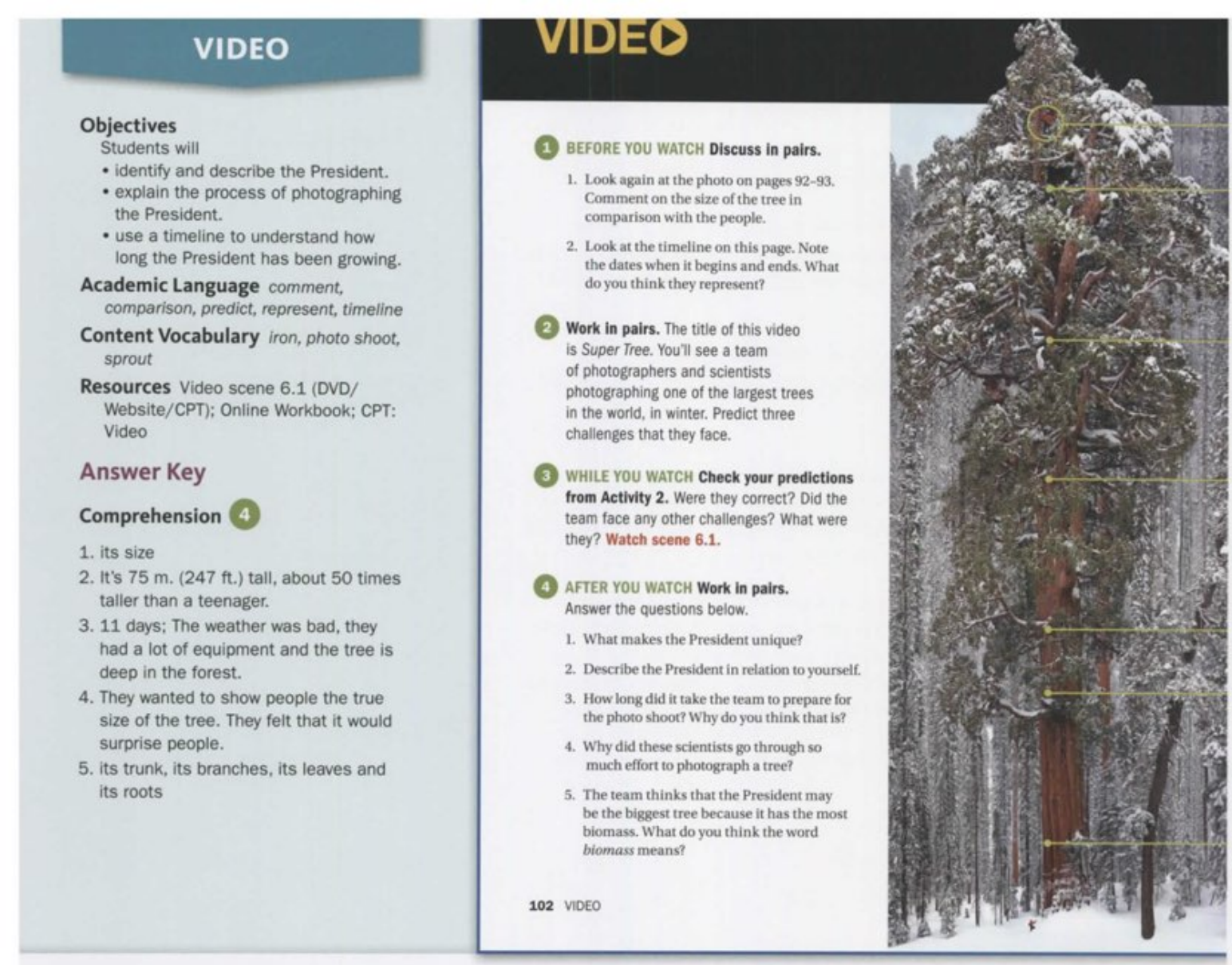
Content Vocabulary *iron, photo shoot, sprout*

Resources Video scene 6.1 (DVD/Website/CPT); Online Workbook; CPT: Video

Answer Key

Comprehension 4

1. its size
2. It's 75 m. (247 ft.) tall, about 50 times taller than a teenager.
3. 11 days; The weather was bad, they had a lot of equipment and the tree is deep in the forest.
4. They wanted to show people the true size of the tree. They felt that it would surprise people.
5. its trunk, its branches, its leaves and its roots



1 **BEFORE YOU WATCH** **Discuss in pairs.**

1. Look again at the photo on pages 92–93. Comment on the size of the tree in comparison with the people.
2. Look at the timeline on this page. Note the dates when it begins and ends. What do you think they represent?

2 **Work in pairs.** The title of this video is *Super Tree*. You'll see a team of photographers and scientists photographing one of the largest trees in the world, in winter. Predict three challenges that they face.

3 **WHILE YOU WATCH** **Check your predictions from Activity 2.** Were they correct? Did the team face any other challenges? What were they? **Watch scene 6.1.**

4 **AFTER YOU WATCH** **Work in pairs.** Answer the questions below.

1. What makes the President unique?
2. Describe the President in relation to yourself.
3. How long did it take the team to prepare for the photo shoot? Why do you think that is?
4. Why did these scientists go through so much effort to photograph a tree?
5. The team thinks that the President may be the biggest tree because it has the most biomass. What do you think the word *biomass* means?

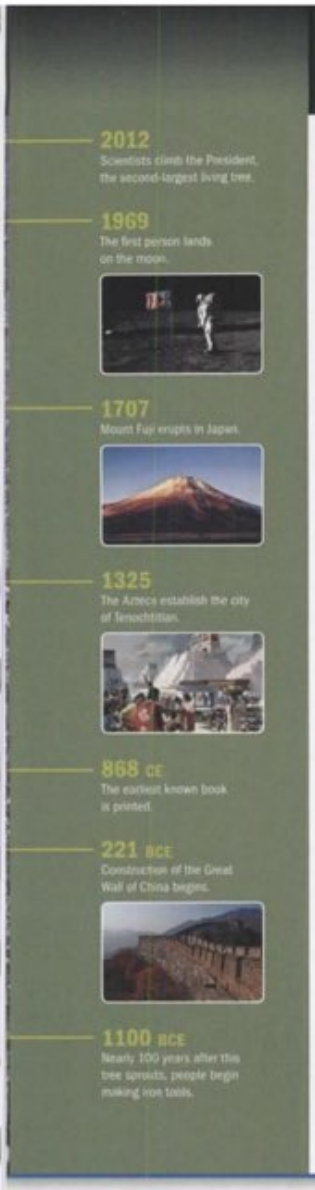
102 VIDEO

Before You Watch 1 2

- Tell students to open their books at pages 92–93. Say *We've already talked about this giant tree. Now we're going to learn more about it, including why and how scientists are studying it.*
- 1 Ask students to turn to pages 102–103. Say *The photo we saw on pages 92 and 93 was just a part of this giant tree. Here's the photo of the whole tree.* Ask a volunteer to read the questions for Activity 1. Review your discussion of the photo on pages 92–93. Ask students to find the people in the photograph on this page and comment on the tree's size in relation to them.
- Direct students' attention to the timeline. Tell them to work in pairs to read the information on the timeline. Ask *How old is this tree?* (around 3,200 years) Tell students to compare their guesses from pages 92–93 with the tree's actual age.
- 2 Read the instructions aloud. Then say *You need to think about three challenges that the team faces. Consider the tree's location, the weather and the tree's size as you discuss your ideas.* Give students several minutes to discuss the topic in pairs. Tell each partner to write his/her ideas on a separate piece of paper. Then ask pairs to share their predictions with the class.

While You Watch 3

- 3 Before you play the video, tell students to review their predictions. Say *As you watch the video, put a tick next to the correct predictions. Cross out the incorrect predictions. Write down any additional challenges, or problems, the team faced while photographing the tree.* Play **Video scene 6.1** and tell to students check their predictions.



5 **Work in pairs.** Read and cross out the false sentences. Then rewrite them correctly.

1. There is only one species of California redwoods.
   False: There are two species of California Redwoods – coastal and mountain.
2. The bigger the tree, the less it's producing.
   False: The bigger the tree, the more it's producing.
3. The President has been growing for over 3,000 years.
   True
4. At over 8 m. (27 ft.) in diameter, the President has the largest trunk of any tree.
   False: The President's trunk is over 8 m., but there are other trees with bigger trunks.
5. The horrible snowstorm is making the team members want to cry.
   False: The impressive size of the tree is making the team members want to cry.

6 **Work in groups.** Look at the timeline. Think of five more significant events that have happened during this tree's lifetime. List them in the order they occur.

7 YOU DECIDE **Choose an activity.**

1. **Work independently.** Photograph something very large in your community. Make sure you get the entire object into your photograph. Display your photo(s) in class and talk about the process of capturing the object.
2. **Work in pairs.** In the video, scientists work together to photograph a big tree. Think of another situation you've heard or read about where people came together to work with a big animal or plant. Why are so many people needed to work with giant things?
3. **Work in groups.** Find out about another well-known big tree. Say where it is, how big it is and how old it is. Share a photo and describe it.

BE THE EXPERT

About the Photo

The image on page 102 is actually 126 frames combined into a single photograph. The photo shows the President, which is the second-largest tree in the world. The largest tree is called The General Sherman and it's also located in Sequoia National Park, California, USA. As giant sequoias age, the rate at which they grow increases. They are strong enough to face harsh weather, fires, lightning, wind and other threats. Their biggest threat is simply falling over. Old sequoias can fall over and die because their shallow root system is not always capable of holding them in place.

Formative Assessment

Can students

- identify and describe the President?

  Ask *What is the President? How big is it?*
- explain the process of photographing the President?

  Ask *How did the team get the photograph of the President?*
- use a timeline to understand how long the President has been growing?

  Ask *What are three historical events that have happened in the President's lifetime?*

Online Workbook Video

After You Watch 4 5 6 7

- 4 Tell students to review the questions and discuss the answers that they know. If necessary, play **Video scene 6.1** again. Tell students to check their work and answer questions that they weren't able to answer in their discussions. Review their responses as a class.
- 5 Ask a volunteer to read all of the sentences aloud. As students hear them, tell them to cross out the false sentences. Then put students into pairs to work on correcting those sentences.
- 6 Say *For this activity, think of any five events you know of in history. Remember, the tree is over 3,000 years old, so think of events that happened since then.* Review the terms *CE* (Common Era) and *BCE* (Before Common Era). If necessary, provide a list of historical events and tell students to look them up to find out when they happened.
- 7 YOU DECIDE Ask students to choose a project. If students choose to photograph the large item, remind them that they may need to take several photos and piece them together, just as the team did for the President.
- For the second option, you may want to find a news story of a team working together on a big animal or plant and tell students to discuss the process.
- If students choose to research another big tree, tell them to compare its size to that of the President.

GRAMMAR 2

Objective
Students will
- correctly use reduced relative clauses.

Grammar Reduction of relative clauses

Academic Language *reduce, reduction*

Content Vocabulary *charismatic, engaging, manta ray, marine megafauna, specialist*

Resources Online Workbook/Workbook pages 62–63; Worksheet 4.6.5 (Teacher's Resource CD-ROM/ Website); Track 081 (Audio CD/ Website/CPT); CPT: Grammar 2

Materials English-language magazines

GRAMMAR 081

Reduction of relative clauses

My brother, **(who is) a filmmaker**, created a documentary about manta rays.

The documentaries **(that) I was telling you about** deal with sea creatures.

One of the documentaries is about a new species **(that/which was) discovered** last year.

The scientists **(that/who) I saw** in the documentaries were really interesting.

The biologist **that/who studies** manta rays lives in Mozambique. (The biologist **studying** manta rays ...)

1 **Read.** Cross out unnecessary words to reduce the clauses.

You read about the giants of the past. But there are plenty of giants still alive today ~~who are~~ living in the sea. The blue whale, ~~which is~~ the largest animal of all time, is still with us today. Many other giants live underwater as well. Andrea Marshall, ~~who is~~ a conservation biologist, studies these *marine megafauna*, or giant, underwater animals. Much of her work focuses on the enormous manta rays ~~that are~~ living off the coast of Mozambique. Manta rays are threatened because they're being harmed by human activity and they don't reproduce often. In 2009, Andrea founded the Marine Megafauna Foundation, ~~which is~~ an organisation that works to protect large marine animals such as the manta ray. One of her proudest moments came in 2013, ~~which was~~ the year she got special protection for the manta ray. 'Mantas are some of the most engaging and charismatic underwater animals you'll ever encounter,' says Andrea. 'They're so curious and clever, always ready to interact and play with you.'


A manta ray

2 **Read.** Rewrite the sentences, reducing the clauses. Possible answers:

1. Biologist Andrea Marshall, who is known for protecting marine megafauna, focuses on the manta ray.
   Biologist Andrea Marshall, known for protecting marine megafauna, focuses on the manta ray.
2. The manta rays that Marshall studies don't reproduce very often.
   The manta rays Marshall studies don't reproduce very often.
3. The manta rays that swim in the waters off Mozambique are in need of protection.
   The manta rays swimming in the waters off Mozambique are in need of protection.

3 **Work in groups.** Cut out the cards. Take turns reading the sentences aloud and reducing the clauses.



Go to page 169.

Warm Up

- **Revisit** Say *We've already learnt how to describe nouns using relative clauses. Remember, a relative clause starts with a relative pronoun, such as* that, which, where, who *and* whose. Write on the board:

> (Your name) speaks English and (your native language).
>
> (Your name) lives in (your country).

- Say *Write a sentence to combine these two sentences into a single sentence with a relative clause.* Give students time write their sentences, and then ask a student to say their sentence. Then check to see if any students re-wrote the sentence differently.
- Ask several students to give additional examples of sentences with relative clauses. Guide them to use examples with different relative pronouns.

Present

- Tell students to open their books at page 104. Direct attention to the yellow grammar box at the top of the page. Say *The sentences in this box contain relative clauses. Remember that relative clauses begin with a relative pronoun.* Tell students to read the sentences and identify the relative pronouns. Point out that the words in brackets can be omitted to reduce the clause without changing the meaning of the sentence.
- Play **Track 081**. Pause the recording after the first sentence and ask *What is the relative clause?* (who is a filmmaker) Then continue playing the recording for students to hear the sentence with the reduced clause. Pause the audio again and ask *What words were eliminated to reduce the clause?* (who is) Repeat this for the remaining examples in the box.
- Direct attention to the last example sentence in the box. Say *When a relative clause with* that, which *or*

who describes the subject of the clause, as it does here, it cannot be reduced just by eliminating the relative pronoun. To reduce this clause, change the verb in the clause to the -ing form. Provide additional examples.

Practise 1 2

- 1 Ask a student to read the directions aloud. Say *First you need to find the relative clauses. Then think about whether you can eliminate any words to reduce the relative clauses. Listen as I read the passage.* Read the entire passage aloud. As you read, tell students to cross out any unnecessary words. Then ask a student to re-read the passage with the reduced clauses. If students need extra support, tell them that they should be able to reduce six clauses in this activity.
- 2 For sentences 2 and 3, tell students to identify what the clause is describing. Remind students that if a clause beginning with *that, which* or *who* describes the subject of the clause, it needs to take the *-ing* form to reduce.

Apply 3

- 3 Tell students to cut out the cards for the game on page 169, mix them up and place them face-down. Divide the class into small groups. Model playing the game by taking a card, reading the sentence aloud and then reducing the clause. For an additional challenge, place a time limit of five minutes on the game.

Extend

- Write the relative pronouns *that, which, where, who* and *whose* down the left-hand side of a blank piece of paper and make five copies. Divide students into five groups and assign each group a previous unit from this book. Give each group a copy of the piece of paper with the relative pronouns. Tell them to revisit their assigned unit and write five sentences related to that unit's theme, one for each of the relative pronouns on their paper. Students' sentences can be true or false.
- Next, ask a volunteer from each group to come to the front and read their group's sentences aloud, one at a time. The volunteer should ask a student to repeat each sentence and reduce the clauses. That student should also say if the sentence is true or false, based on what they learnt.
- Hand out **Worksheet 4.6.5** to provide additional practice with the reduction of relative clauses.

Consolidate

- Put students into pairs and give each pair a magazine. Tell partners to scan the magazine to find at least two sentences with relative clauses. Tell students to underline or copy these sentences and then rewrite them reducing the clauses. As time allows, ask pairs to read the original sentences as well as the sentences with reduced clauses.

BE THE EXPERT

Grammar in Depth

Relative clauses can be reduced by eliminating the relative pronoun and, in some cases, the verb that follows it. In defining relative clauses, explain that when the relative pronouns *that, which* or *who* are followed by a clause with a subject, these relative pronouns can be omitted. For example: *The animals that she studies* can be reduced to *The animals she studies.* When a relative clause beginning with *that, which* or *who* modifies the subject of the clause, the relative pronoun cannot be omitted. For example: *The person who studies sharks ...* In these instances, the clause can be reduced by changing the verb in the relative clause to the present participle (*-ing* form): *The person studying sharks ...*

Formative Assessment

Can students

- correctly use reduced relative clauses?

Ask students to restate the following sentences, reducing the relative clauses.

The manta ray that we saw swimming near the shore was a female.

Giant animals that live in the sea can be harmed by human activity.

Workbook For additional practice, assign Workbook pages 62–63.

Online Workbook Grammar 2

WRITING

Objectives
Students will
- identify elements of a news report.
- use the five *W*s and *how* as a guide for including important information.
- analyse a model news report.
- write an essay about a giant discovery of the past or present.

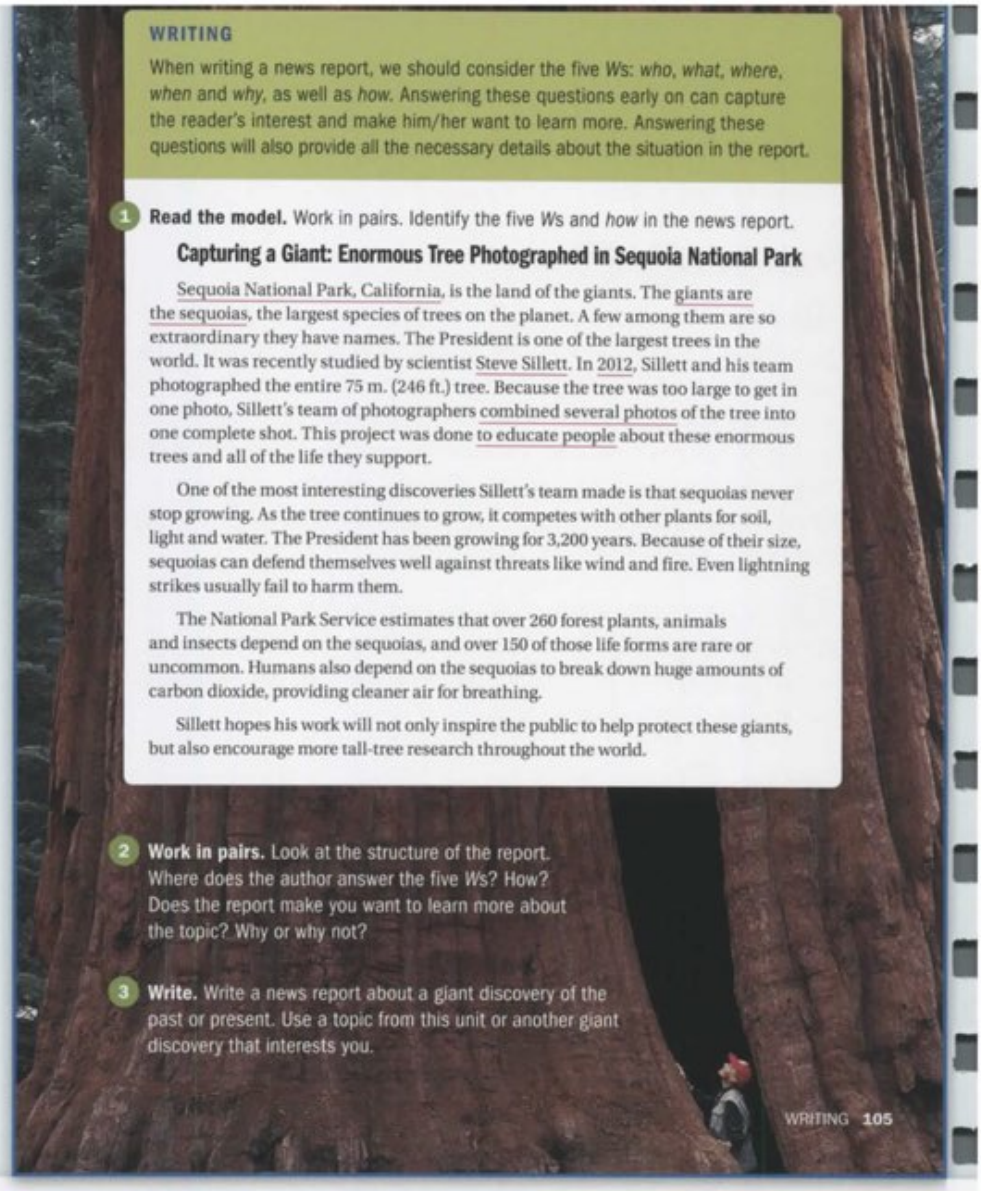
Writing News report

Academic Language *structure*

Content Vocabulary *carbon dioxide, complete, depend on, fail to (do something), soil*

Resources Online Workbook/Workbook page 64; Process Writing Worksheets 1–5; Genre Writing Worksheet: News Report (Teacher's Resource CD-ROM/ Website); CPT: Writing

Materials coloured pencils or highlighters, English-language newspaper articles



WRITING

When writing a news report, we should consider the five *W*s: *who, what, where, when* and *why*, as well as *how*. Answering these questions early on can capture the reader's interest and make him/her want to learn more. Answering these questions will also provide all the necessary details about the situation in the report.

1 **Read the model.** Work in pairs. Identify the five *W*s and *how* in the news report.

Capturing a Giant: Enormous Tree Photographed in Sequoia National Park

Sequoia National Park, California, is the land of the giants. The giants are the sequoias, the largest species of trees on the planet. A few among them are so extraordinary they have names. The President is one of the largest trees in the world. It was recently studied by scientist Steve Sillett. In 2012, Sillett and his team photographed the entire 75 m. (246 ft.) tree. Because the tree was too large to get in one photo, Sillett's team of photographers combined several photos of the tree into one complete shot. This project was done to educate people about these enormous trees and all of the life they support.

One of the most interesting discoveries Sillett's team made is that sequoias never stop growing. As the tree continues to grow, it competes with other plants for soil, light and water. The President has been growing for 3,200 years. Because of their size, sequoias can defend themselves well against threats like wind and fire. Even lightning strikes usually fail to harm them.

The National Park Service estimates that over 260 forest plants, animals and insects depend on the sequoias, and over 150 of those life forms are rare or uncommon. Humans also depend on the sequoias to break down huge amounts of carbon dioxide, providing cleaner air for breathing.

Sillett hopes his work will not only inspire the public to help protect these giants, but also encourage more tall-tree research throughout the world.

2 **Work in pairs.** Look at the structure of the report. Where does the author answer the five *W*s? How? Does the report make you want to learn more about the topic? Why or why not?

3 **Write.** Write a news report about a giant discovery of the past or present. Use a topic from this unit or another giant discovery that interests you.

WRITING 105

Warm Up

- **Pre-teach** Put students into pairs and give each pair a newspaper article. The article can be from print or online news sources. Give each pair a coloured pencil or highlighter.
- Say *In this lesson, we're going to be writing a news report. You all have a news report in front of you. What are the different parts of a news report?* (title, subtitle, photos, captions, byline, article) Give students several minutes to identify the parts of the news report and then list them as a class. If students don't have the vocabulary to name these parts, say the words aloud and ask students to point to that part in their articles.
- Next, ask *What type of information do you find in a news report?* Tell students to discuss with their partner and then share ideas as a class. Say *In a news report, we find out about what happened, where and when it happened and who was involved. We also may learn details about why and how something happened or the outcome of an event.*
- Write the following words on the board: *what, when, where, who, why* and *how*. Tell students to scan their articles to find information that corresponds to at least two of these question words. Tell them to highlight the relevant information in the article. Point out that students should just scan and that they aren't required to read and understand the entire article. Ask several students to share a highlighted word and the corresponding question word.

Present

- Tell students to open their books at page 105. Direct them to the green box at the top of the page. Read the information aloud and tell students to follow along.

- **Explain** Say *Each of you just found one or two pieces of information that correspond to the five Ws or how. But when we read a news report, we should find information that corresponds to all six words. Doing this will help us understand the whole situation being described.*

- **Give examples** Point to the six question words on the board and tell students to copy them onto a piece of paper. Say *I'm going to tell you a story. As I tell it, write down information next to each question word.* Invent a story such as the following: *(Jane) walked into your classroom last Wednesday at eight o'clock. The room was empty. (Jane) called the office. The secretary said that there had been a small fire in the classroom next door and that (Jane) couldn't be in that part of the building. (Jane) went outside and learnt that a small fire was caused by a chemistry experiment.*

- Say *On my piece of paper, I have* who. *I know the* who *in the story refers to (Jane), so I'll write (her) name. What's the* what *in the story?* (Jane discovering empty classroom) Continue identifying important information in the story, telling students to note it next to the correct word on their piece of paper. (where: school, classroom; when: Wednesday at 8.00; why: fire; how: chemistry experiment)

Read the Model 1 2

- 1 Say *Now we're going to read a model news report. Look at its headline and the background photo. What is the news report about?* (photographing a giant tree)

- Read the instructions aloud. Say *Underline any information that could answer the five Ws and how.* Read the article aloud once and tell students to follow along. Then read it again. This time, pause after every few sentences and ask *Did you hear information on any of the five Ws? Which one(s)? What is the information? OK, let's underline it.* Continue this throughout the report.

- 2 Say *Re-read the report with your partner. Notice where in the report the questions are answered.* (in the first paragraph) Allow students several minutes to re-read the report. Then tell them to discuss whether the report makes them want to learn more about the topic and why.

- **Worksheet** If your students need a reminder of the elements of a news report, you may want to hand out the **News Report Genre Writing Worksheet** and review it together.

Plan 3

- 3 Say *Now you're going to write a news report. You need to make sure that you include answers to the same questions in your report.*

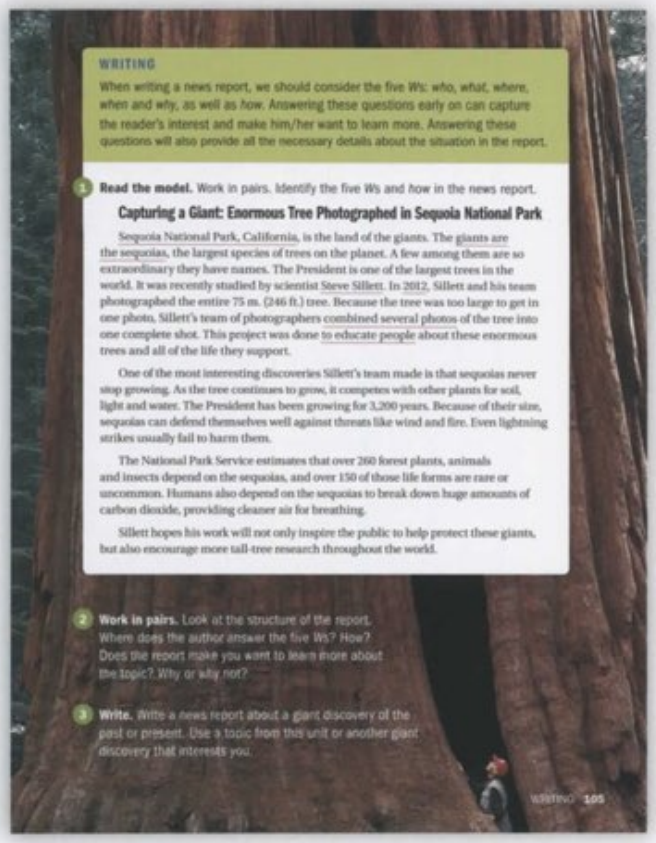
BE THE EXPERT

Writing Support

Usage A news report is almost always written with past tenses. Remind students to review narrative tenses before writing a news report. To talk about what was happening when an event took place, students should use the past continuous tense (e.g., *was sleeping*). Students should use the past perfect tense (e.g., *had gone*) or the past perfect continuous tense (e.g., *had been going*) to give details about the situation leading up to the event. To describe the event itself, students use the past simple (e.g., *shook, escaped*). Students might use the present or present continuous tenses to talk about the current situation being reported on and the future tenses with *will* or *going to* to discuss the implications of the event. Refer students to page 82 for a review of narrative tenses.

Workbook For scaffolded writing support, assign Workbook page 64.

Online Workbook Writing



WRITING

When writing a news report, we should consider the five *Ws*: who, what, where, when and why, as well as *how*. Answering these questions early on can capture the reader's interest and make him/her want to learn more. Answering these questions will also provide all the necessary details about the situation in the report.

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Sillett hopes his work will not only inspire the public to help protect these giants, but also encourage more tall-tree research throughout the world.

2 **Work in pairs.** Look at the structure of the report. Where does the author answer the five *Ws*? How? Does the report make you want to learn more about the topic? Why or why not?

3 **Write.** Write a news report about a giant discovery of the past or present. Use a topic from this unit or another giant discovery that interests you.

WRITING 105

- Tell students to choose a giant discovery to research. Point out that it could be a discovery of a large animal, a large ancient building or structure, a geographical feature, a plant or any other 'giant'. You may want to prepare a list of topics to help students choose. Say *Once you have the information you need about your discovery, you're ready to start writing.*

- **Worksheets** If students need a reminder of any of the steps of process writing, hand out **Process Writing Worksheets 1–5** and review them together.

- **Workbook** Refer students to Workbook page 64 to help them organise and plan their writing.

Write

- After students have finished their pre-writing, give them time to work on their first drafts. Point out that they should draft their news reports and then decide on an appropriate headline or title. If you don't have enough time in class, assign the first draft as homework.

Revise

- After students finish their first drafts, tell them review their writing for clarity and organisation. Remind students to consider the following: *Do I address each of the five* Ws *and* how *as I describe the discovery? Is the way I present this information interesting? Will readers want to learn more about the event? Do I include information about the outcome? Does my headline or title attract attention? What needs more work?*

Edit and Proofread

- Remind students to consider elements of style, such as a creative, effective title, sentence variety, parallelism and word choice. Then tell them to proofread for mistakes in grammar, punctuation, capitalisation and spelling.

Publish

- Publishing includes handing in pieces of writing to the teacher, sharing work with classmates, adding pieces to a class book, displaying pieces on a classroom wall or in a hallway and posting on the Internet.

- You might want to compile all students' work into a single newspaper on 'giant discoveries'. Make copies and share them with the class.

Writing Assessment

Use these guidelines to assess students' writing. You can add other aspects of their writing you'd like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

	1	2	3	4
Writing Ideas are clear and well organised, and student answers each of the five *Ws* and *how*.				
Grammar Student uses relative clauses and reduced relative clauses.				
Vocabulary Student uses a variety of word choices, including words used in this unit.				



MISSION

Objectives
Students will
- talk about their own big plans.
- talk about humans' role in the history of Earth.

Content Vocabulary *privileged*

Resources Video scene 6.2 (DVD/Website/CPT); Worksheet 4.6.6 (Teacher's Resource CD-ROM/Website); Online Workbook: Meet the Explorer; CPT: Mission

BE THE EXPERT

Teaching Tip

When activities ask students about personal topics, allow them to choose their own group members. This allows them to have honest, open conversations. When students are comfortable in their group, they'll be more likely to engage and share information. Before such activities, always remind students that they should be respectful and sensitive to what their classmates are saying.

Online Workbook Meet the Explorer

Mission

- Read aloud the mission, *Make Big Plans*. Say *We've learnt about giants of the past and their extinction.* Ask a student to read aloud Nizar Ibrahim's quote. Say *Nizar tells us that the world is not made for us. What do you think he means by this?* (Many other creatures have lived on Earth before humans.) Then say *Nizar also says we're privileged to be here. By saying we're privileged, he means that we are lucky or fortunate to be here. How can we make the most of our time on Earth?* Ask several students to explain their ideas.
- **Activity 1** Say *Now let's watch a video about Nizar Ibrahim.* Play **Video scene 6.2**. Tell students to focus on Nizar's ideas about the significance of *Spinosaurus*.
- **Activity 2** Ask students to list their 'big plans' on a sheet of paper. Remind them to include personal as well as professional plans. Then say *Share your plans with a small group. How are your future plans the same? How are they different? Whose plans are most realistic? Why?* Tell students to discuss their plans in groups and then share their discussions with the class.
- **Activity 3** Ask several students to give examples of how they are privileged. Then tell students to discuss reasons why people are privileged to be on Earth. Divide the class into two groups: one that agrees with Nizar's statement and one that doesn't. Ask members from each group to take turns presenting their points of view and giving supporting details.
- **Worksheet** Hand out **Worksheet 4.6.6.** Explain that students will use the worksheet to further discuss Nizar's work and ideas.

PROJECT

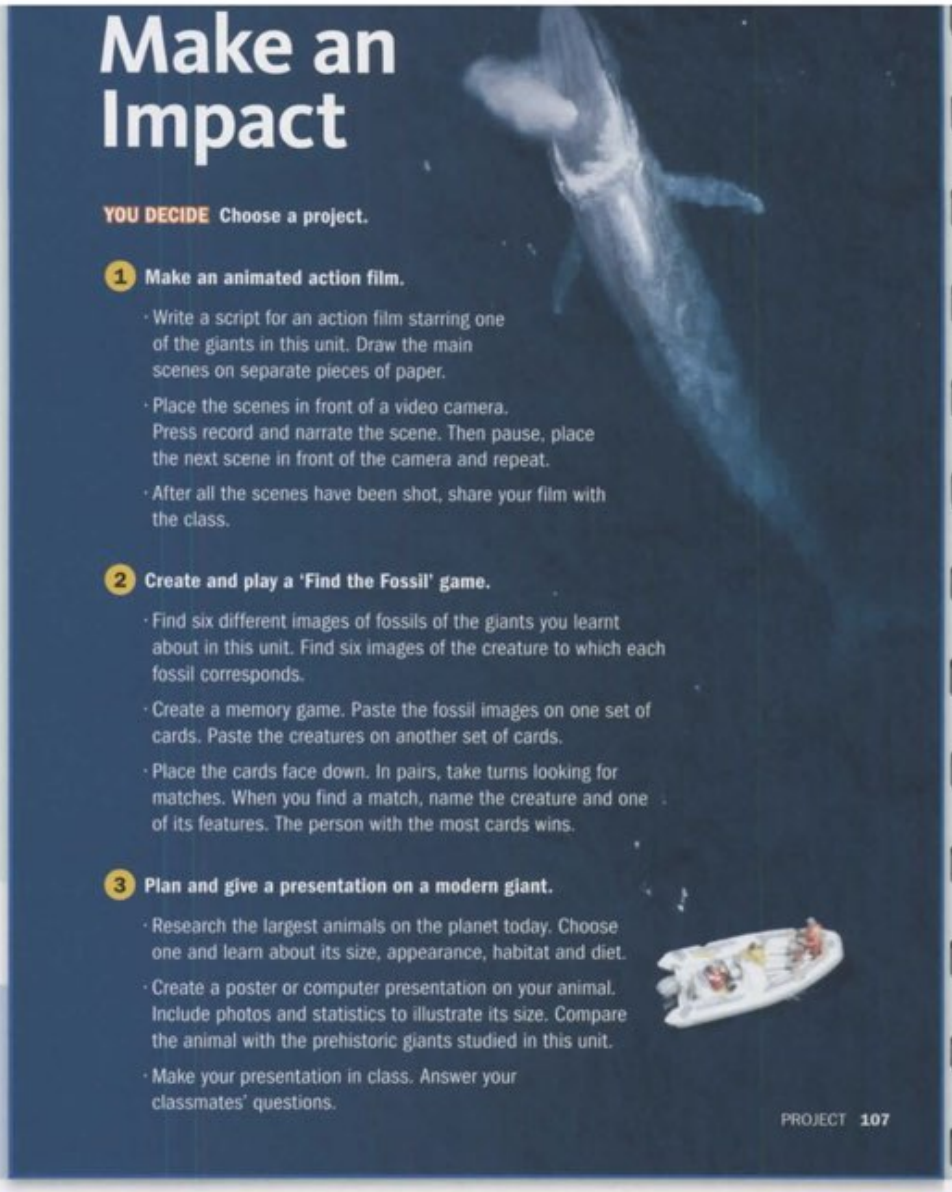
Objective
Students will
- choose and complete a project related to giants.

Academic Language *illustrate (an idea)*

Content Vocabulary *correspond, script, shoot (a film), star, stop-motion animation*

Resources Assessment: Unit 6 Quiz; Workbook pages 65 and 95; Worksheet 4.6.7; Graphic Organiser: Storyboard (Teacher's Resource CD-ROM/Website); CPT: Make an Impact and Review Games

Materials pieces of card, poster board, video recording device



Make an Impact

YOU DECIDE **Choose a project.**

1 Make an animated action film.

- Write a script for an action film starring one of the giants in this unit. Draw the main scenes on separate pieces of paper.
- Place the scenes in front of a video camera. Press record and narrate the scene. Then pause, place the next scene in front of the camera and repeat.
- After all the scenes have been shot, share your film with the class.

2 Create and play a 'Find the Fossil' game.

- Find six different images of fossils of the giants you learnt about in this unit. Find six images of the creature to which each fossil corresponds.
- Create a memory game. Paste the fossil images on one set of cards. Paste the creatures on another set of cards.
- Place the cards face down. In pairs, take turns looking for matches. When you find a match, name the creature and one of its features. The person with the most cards wins.

3 Plan and give a presentation on a modern giant.

- Research the largest animals on the planet today. Choose one and learn about its size, appearance, habitat and diet.
- Create a poster or computer presentation on your animal. Include photos and statistics to illustrate its size. Compare the animal with the prehistoric giants studied in this unit.
- Make your presentation in class. Answer your classmates' questions.

PROJECT 107

Assessment Go to page 260.

Unit Review Assign Worksheet 4.6.7
Workbook Assign pages 65 and 95.
Online Workbook Now I can

Prepare

- **YOU DECIDE** Ask students to choose a project.
- **Activity 1** Give students one or more copies of the Storyboard graphic organiser and tell them to use it to plan their ideas. Teach the phrase *stop-motion animation* and tell students to look up the term online to learn more about the process of creating an animation using this method. Tell students to write a script for their animation and hand it in for your review before they begin recording their video.
- **Activity 2** Students should go online to research fossils or bones and historical renderings of the creatures that correspond to those remains. Give students pieces of card and tell them to paste the photos they find onto each card to create the game. You may want to tell students to create several copies of each image before creating the game so that there are enough games for all students in the class.
- **Activity 3** Before students begin, ask them to tell you what animal they chose. If many students are selecting the same animal, offer alternatives to ensure variety in the presentations.

Share

- Schedule time for groups to present their final projects to the class. Make sure you have the appropriate equipment for students to project videos and presentations.
- **Modify** For Activity 1, students might create their film from drawings, clay figures, toys, puppets or digital animation. Students can create the cards online for Activity 2 and then print out several copies for each group in the class. For Activity 3, provide a list of today's giants for students to choose from.

STUDENT'S BOOK AUDIO SCRIPT

Track 070 1 **Listen and read.** See Student's Book pages 94–95.

Track 071 2 **LEARN NEW WORDS** **ancient** / Sequoias are the ancient giants of the forest. **catastrophe** / A major natural catastrophe led to the end of the dinosaurs. **develop** / Some dinosaurs weren't able to develop skills they needed to survive. **diameter** / *T. rex*'s eyes were more than nine centimetres in diameter. **enormous** / Most dinosaurs were enormous compared to animals that live today. **exception** / There were smaller dinosaurs that were exceptions to the rule. **extinction** / Like dinosaurs, many animals of today face extinction. **frightening** / With its enormous teeth, *T. rex* was a frightening predator. **heart** / Scientists compared *T. rex*'s heart with that of modern birds. **huge** / *Argentinosaurus* was so huge that the Earth shook when it walked. **jaw** / *T. rex* had powerful jaws and sharp teeth. **prehistoric** / Dinosaurs lived in prehistoric times. **stomach** /Crushed bones have been found in *T. rex*'s stomach. **weigh** / *Argentinosaurus* weighed as much as ten elephants.

Track 072 5 You may have heard that some dinosaurs had tiny brains. This is true for herbivores such as *Stegosaurus*, which had a brain the size of a lime. Predators such as *T. rex* had larger brains. That's because these massive creatures needed more developed brains in order to be effective predators. Being a carnivore, the *T. rex* could eat up to 230 kilograms of meat in a single bite! This was a huge amount of food, but not enough to make *T. rex* the biggest dinosaur that ever lived. That was the *Argentinosaurus*. Even though it only ate plants, its 100,000-calorie-per-day diet allowed it to become the largest dinosaur ever discovered. Despite its gigantic body, *Argentinosaurus* probably had a very small brain. But at that size, he probably didn't need to be much cleverer than the plants he fed upon.

Track 073 5 **LEARN NEW WORDS** **carnivore** / A carnivore is an animal that eats mostly meat. **gigantic** / *Spinosaurus* was a gigantic meat-eating dinosaur. **herbivore** / A herbivore is an animal that eats only plants. **massive** / Most dinosaurs were massive creatures.

Track 074 **SPEAKING STRATEGY** See Student's Book page 97.

Track 075 1 **S1**: Mr Farrah, is it possible that *Argentinosaurus* wasn't the biggest dinosaur?

S2: Well, Youssef, it's the biggest one that the palaeontologists have discovered so far, but there are other *sauropods* that were around the same size, maybe bigger.

S1: *Sauropods*?

S2: Yes, huge long-necked and long-tailed herbivores like *Argentinosaurus*.

S1: I wonder why their necks were so long.

S2: In theory, they developed long necks so they could eat from trees without moving their heavy bodies.

S1: With their huge size, I can't imagine other dinosaurs would attack them. How did they go extinct?

S2: What may have happened is that carnivores focused more on eating their eggs or their young, instead of attacking the adults. It could be that the adults weren't able to protect their young and they died out.

Track 076 **GRAMMAR** See Student's Book page 98.

Track 077 3 When you hear the words 'giant predator', you might think of the fierce *T. rex*. And it's true that *T. rex* was among the largest ancient predators on land. However, *T. rex* was only about two-thirds of the size of the sea giant of the past, an ancient shark called megalodon. Megalodon, whose name means *giant tooth*, was the largest known marine predator. Megalodon was 15 metres long and weighed as much as 50 tonnes, which is about the same as 18 adult male African elephants.

Megalodon lived from 16 million years ago to 2 million years ago, during the Miocene era. Little remains of this prehistoric sea creature except for its enormous jaws, which measure nearly 3 metres wide and 2.75 metres tall. These jaws were so huge that they could crush a car with a single bite! Despite its enormous size and the fact that it preyed on whales and other marine giants, megalodon wasn't able to survive. Cooling ocean temperatures and increased competition resulted in its extinction. Today, when we think of predators in the sea, we think of the great white shark. Megalodon had a similar appearance to the great white, but it was 2–3 times the size of its modern cousin.

Track 078 3 **LEARN NEW WORDS** **era** / *T. rex* was one of the largest predators of its era. **fierce** / The megalodon was fierce enough to capture and kill giant whales. **prey on** / Giant carnivores preyed on smaller animals. **times** / The megalodon was nearly three times the size of the great white shark.

Track 079 2 **LEARN NEW WORDS** **advantage** / *Spinosaurus*'s large jaws gave it an advantage over other dinosaurs. **extraordinary** / *Spinosaurus* was extraordinary because it was an aquatic dinosaur. **significant** / Scientists have made significant discoveries about dinosaurs in the Sahara. **useless** / It would have been useless to try to escape from a predator like *Spinosaurus*.

Track 080 3 **WHILE YOU READ** See Student's Book pages 100–101.

Track 081 **GRAMMAR** See Student's Book page 104.

Track 082 1 **Express Yourself** See Student's Book pages 108–109.

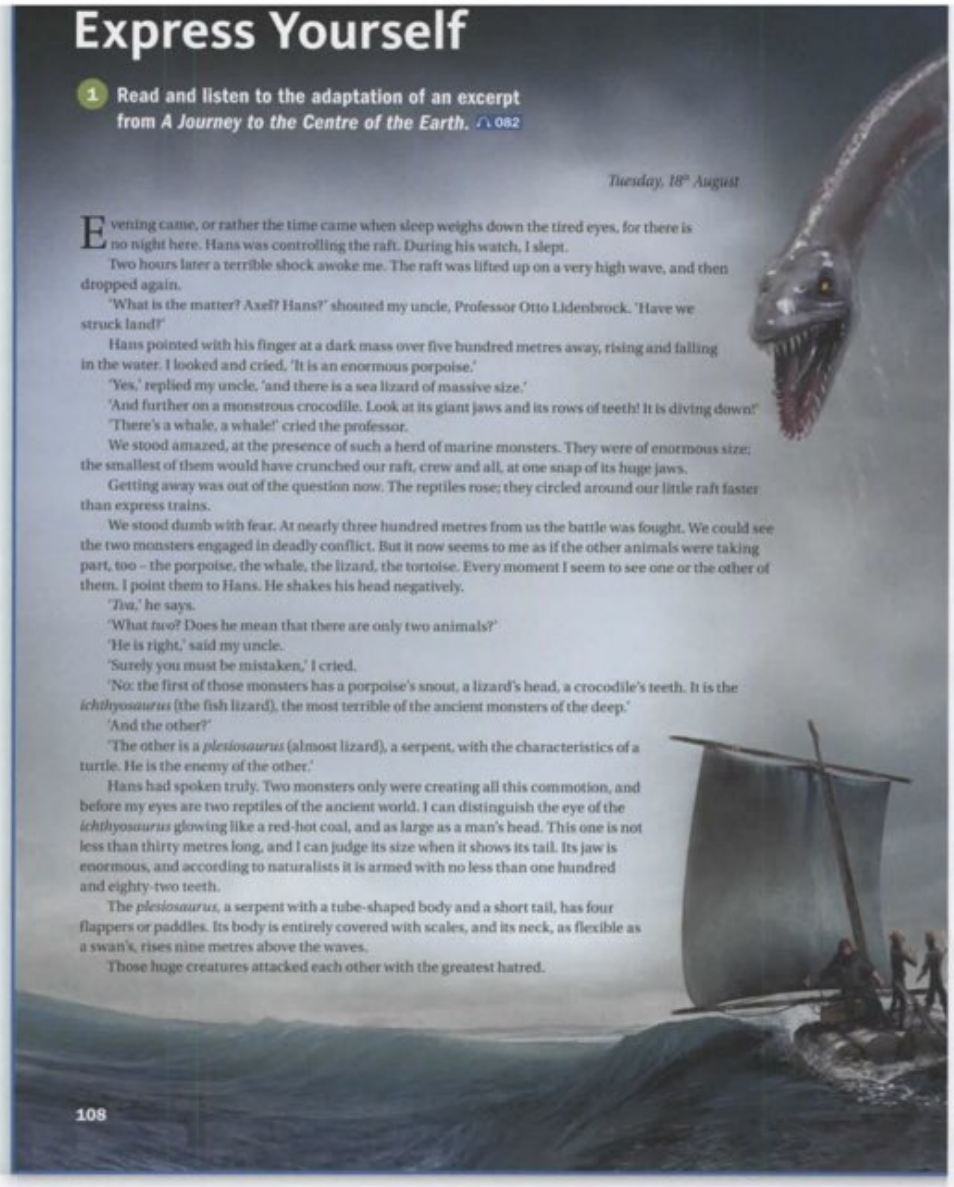
Express Yourself

Objectives
Students will
- identify elements of a literary work.
- connect ideas about exploration and giant discoveries.

Academic Language *excerpt, imagine, novel, podcast, skit*

Content Vocabulary *coal, commotion, crunch, dumb, enemy, judge, mass, monstrous, naturalist, negatively, porpoise, presence, raft, serpent, snap, snout, swan*

Resources Workbook pages 66–67/ Online Workbook (Units 5–6 Review); Worksheet 4.6.8 (Teacher's Resource CD-ROM/Website); Track 082 (Audio CD/Website/CPT); CPT: Express Yourself Units 5–6



Express Yourself

1 **Read and listen to the adaptation of an excerpt from *A Journey to the Centre of the Earth*.** 082

Tuesday, 18th August

Evening came, or rather the time came when sleep weighs down the tired eyes, for there is no night here. Hans was controlling the raft. During his watch, I slept.

Two hours later a terrible shock awoke me. The raft was lifted up on a very high wave, and then dropped again.

'What is the matter? Axel? Hans?' shouted my uncle, Professor Otto Lidenbrock. 'Have we struck land?'

Hans pointed with his finger at a dark mass over five hundred metres away, rising and falling in the water. I looked and cried, 'It is an enormous porpoise.'

'Yes,' replied my uncle, 'and there is a sea lizard of massive size.'

'And further on a monstrous crocodile. Look at its giant jaws and its rows of teeth! It is diving down!'

'There's a whale, a whale!' cried the professor.

We stood amazed, at the presence of such a herd of marine monsters. They were of enormous size; the smallest of them would have crunched our raft, crew and all, at one snap of its huge jaws.

Getting away was out of the question now. The reptiles rose; they circled around our little raft faster than express trains.

We stood dumb with fear. At nearly three hundred metres from us the battle was fought. We could see the two monsters engaged in deadly conflict. But it now seems to me as if the other animals were taking part, too – the porpoise, the whale, the lizard, the tortoise. Every moment I seem to see one or the other of them. I point them to Hans. He shakes his head negatively.

'*Two*,' he says.

'What *two*? Does he mean that there are only two animals?'

'He is right,' said my uncle.

'Surely you must be mistaken,' I cried.

'No: the first of those monsters has a porpoise's snout, a lizard's head, a crocodile's teeth. It is the *ichthyosaurus* (the fish lizard), the most terrible of the ancient monsters of the deep.'

'And the other?'

'The other is a *plesiosaurus* (almost lizard), a serpent, with the characteristics of a turtle. He is the enemy of the other.'

Hans had spoken truly. Two monsters only were creating all this commotion, and before my eyes are two reptiles of the ancient world. I can distinguish the eye of the *ichthyosaurus* glowing like a red-hot coal, and as large as a man's head. This one is not less than thirty metres long, and I can judge its size when it shows its tail. Its jaw is enormous, and according to naturalists it is armed with no less than one hundred and eighty-two teeth.

The *plesiosaurus*, a serpent with a tube-shaped body and a short tail, has four flappers or paddles. Its body is entirely covered with scales, and its neck, as flexible as a swan's, rises nine metres above the waves.

Those huge creatures attacked each other with the greatest hatred.

108

Present 1

- **Set the stage** Say *Today we're going to read an excerpt or a short passage, from a science-fiction novel called* A Journey to the Centre of the Earth. Briefly explain what *science-fiction* means, giving other examples of science-fiction books and films that students may be familiar with. Then say *This story describes the adventure of young Axel Lidenbrock, who travels to the centre of the Earth with his uncle, Professor Otto Lidenbrock and their guide, Hans.* Write the names of the characters on the board for students' reference. Tell students to study the image and predict what the story will be about.

- **1** **Read together** Say *We're going to hear and read part of a chapter of this novel.* Play **Track 082** and tell students to follow along. Then play **Track 082** a second time. This time pause the track periodically to check for comprehension. Ask questions such as:

  Where are the people?
  What do they discover?
  How many animals do they see? Describe each one.

Practise 2

- **2** **Discuss** Ask *Have you ever thought about what is underneath the ground? What do you think the centre of the Earth looks like?* Ask several students to share their ideas. Then tell students to discuss the first item in small groups, comparing the image with what they had thought previously.

- For the second item, remind students to re-read the descriptions of the creatures in the text. After they discuss the topic, listen to students' responses.

- For the third item, tell students to choose one of the creatures from the story and compare it with a prehistoric giant they studied in Unit 6. Ask artistic students to draw illustrations of the creatures.



2 Discuss in groups.

1. The characters are exploring the centre of the Earth. How do you imagine the centre of the Earth looks? How do the picture and the text compare with your own ideas?
2. Imagine you're on this journey. Describe how you feel when you see the ancient creatures fighting in the sea.
3. Describe the *ichthyosaurus* and the *plesiosaurus* in your own words. Compare them with the giant creatures you studied in Unit 6.

3 Connect ideas. In Unit 5, you learnt about exploration and discovery. In Unit 6, you learnt about giants past and present. How does the reading passage connect these two units? Do you think that real-life explorers ever had experiences similar to those of Axel, Hans and Professor Lidenbrock? Explain.

4 YOU DECIDE Choose an activity.

1. Choose a topic:
   - exploration
   - giant discoveries
2. Choose a way to express yourself:
   - the next scene of the story
   - an action/adventure skit
   - a podcast describing an adventure or a discovery
3. Present your work.

109

BE THE EXPERT

Our World in Context

The science-fiction novel *A Journey to the Centre of the Earth* was written by French novelist Jules Verne and originally published as *Voyage au centre de la Terre* in 1864. In the story, Professor Otto Lidenbrock learns how to gain passage to the centre of the Earth through a volcano in Iceland. The novel tells of the incredible journey of Otto, his nephew Axel and their Icelandic guide, Hans Bjelke. The excerpt included here has been adapted from an 1877 English translation.

Cumulative Review

Hand out Cumulative Review Worksheet 4.6.8.

Formative Assessment

Can students

- identify elements of a literary work?

  Ask students to identify the main characters of the story and summarise the conflict the characters faced.

- connect ideas about exploration and giant discoveries?

  Ask *What risks did the characters take during their journey? Did their discovery make it worth the risk? Why or why not?*

Workbook Assign pages 66–67.
Online Workbook Units 5–6 Review

Connect 3

- 3 **Critical thinking** Read the text aloud. Before students begin their discussions, bring up stories of National Geographic Explorers that students have learnt about. Tell them to compare the stories of people like Cory Richards, Sylvia Earle or Lee Berger with the explorers in *A Journey to the Centre of the Earth*. Ask *What do their experiences have in common? What motivates the real-life explorers? What do you think motivates the explorers in the story?*

- After several moments of group discussion, ask students to share key points with the class.

Prepare 4

- Review the instructions for Activity 4. You may want to assign this activity in advance so that students have time to work on it in class or at home.

- 4 YOU DECIDE Tell students to choose an activity. Students who choose to continue the story can go online to find the next chapter (Chapter 34) of the novel and summarise it in their own words. Or they can choose to invent what happens next.

- Students can choose to film the skit or act it out in class. Encourage students to find appropriate props and costumes to make their story more interesting.

- Tell students who choose the podcast to first draft and edit a transcript of their work.

Share

- Set aside time for students to share their work with the class. If time does not allow for all students to present, ask them to record and share their work as audio or video files on a class website or social media page.

In This Unit

Theme This unit is about creative problem-solving.

Content Objectives
Students will
- identify creative ways to solve problems.
- identify how and why more and more people are becoming innovators.
- describe how technology is used to help disabled musicians perform.
- read about the failures of very successful people.

Language Objectives
Students will
- talk about problems and how people can solve them creatively.
- ask someone to defend an opinion.
- use *wish* and *if only* to express wishes and regrets.
- use adverbs to express different levels of intensity.
- write an exemplification essay about creative problem-solving.

Vocabulary
pages 112–113 *3D printer, application, concept, device, do-it-yourself, experiment, failure, hands-on, hardware, inspire, open-source, play around with, resourceful, solve, software*
page 114 *affordable, approach, flexible, innovator*
page 117 *disabled, interpret, transform, wireless*
page 118 *amount to, discourage, persistent, success, turn away*
Vocabulary Strategies Latin roots (*nov, flex*); Identify antonyms

Speaking Strategy Asking someone to defend an opinion

Grammar
Grammar 1 Use *wish* and *if only* to express wishes and regrets
Grammar 2 Use adverbs to express different levels of intensity

Reading *Great Failures*
Reading Strategy Take notes

Video Scene 7.1: *Sanga's Solution*; Scene 7.2: Meet Tan Le

Writing Exemplification essay

National Geographic Mission Don't Give Up

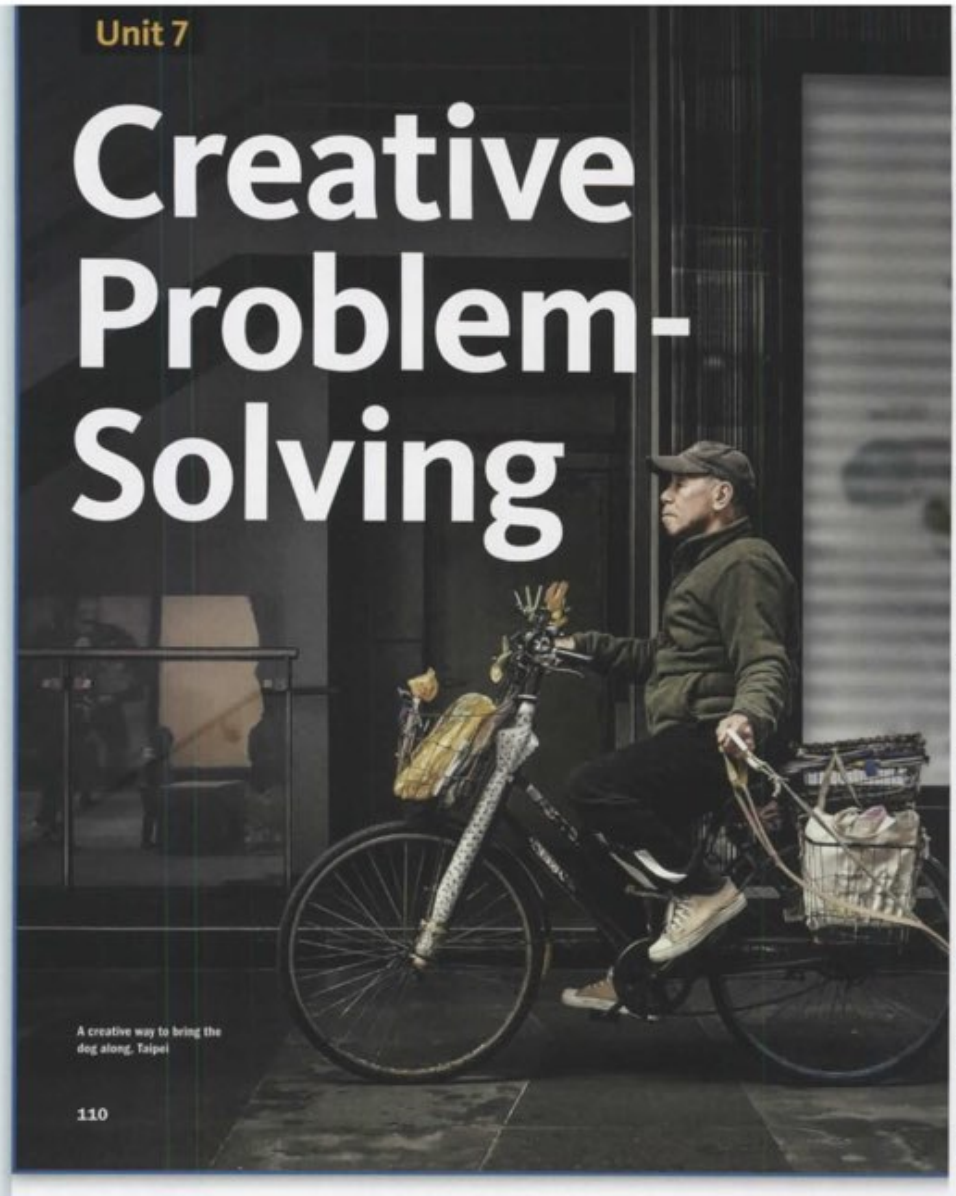
Project
- Idea pitch
- Profile of a great failure
- App advertisement

Pronunciation Variations in stress and intonation

Pacing Guides 4.7.1, 4.7.2, 4.7.3

Unit 7

Creative Problem-Solving



A creative way to bring the dog along, Taipei

110

Introduce the Unit

- **Set the stage** Arrange students in groups of three or four. Then say *Imagine the following situation. You're attending a summer camp. You're asked by your camp leader to go into the forest and gather wood to make a fire. Your group goes into the woods with only an axe for chopping wood and a compass.* Clarify the meaning of the words *axe* and *compass*. Then continue by saying *You're deep in the woods and it's getting late, so you want to get back to the campsite before dark. Suddenly, you realise that you lost your compass. Your group is lost in the woods without a compass and it's getting dark. You have a big problem. Take some time with your group now and think of a way to solve this problem.*

- Allow time for groups to discuss what they would do. Then listen to their proposed solutions. Talk about which are most creative and which, if any, are realistic.

- Tell students to open their books at pages 110–111. Say *In this unit, we're looking at creative ways to solve problems.* Tell students



to study the photo. Then ask a student to read Question 1 aloud and tell students to work in pairs to discuss the answer.

- Say *This man came up with a low-tech solution to his problem. We're going to look at high-tech solutions as well. Tan Le is our unit explorer and she has come up with high-tech, creative ways to solve problems.* Ask a student to read Tan's quote. Then ask *What are you passionate about? What could you create based on this passion?* Tell students to discuss the questions in pairs and share their answers with you.
- Allow time for students to read and discuss Questions 2 and 3 in pairs or small groups. Review their answers as a class.

Extend

- Hand out **Worksheet 4.7.1**. Put students into pairs. Explain that partners will be writing about and discussing creative problem-solving.

UNIT OPENER

Objectives
Students will
- describe and discuss a photo.
- discuss creative problem-solving.

Resources Worksheet 4.7.1 (Teacher's Resource CD-ROM/Website); CPT: Unit Opener

BE THE EXPERT

About the Photo

The photo shows a man doing his errands, with his dog following behind him on a skateboard. The photo gives a look at one individual's daily experience in Taipei, an enormous city of nearly 3 million people.

Teaching Tip

Try to follow a classroom routine as much as possible. Students of any age respond well to routines. A routine sets the framework for classroom procedures. An example of a routine includes a warm-up, a few moments of direct instruction, time for pair or group activities and a procedure for wrapping up and leaving the class. Make sure your routine includes opportunities for taking the register, reviewing or collecting homework and answering students' questions. By keeping your routine consistent, you're setting clear expectations. And when students know what to expect, they're more likely to remain engaged and on-task.

Related Word

lead

VOCABULARY

Objectives
Students will
- identify and use vocabulary related to creative problem-solving.
- use new vocabulary to read about and discuss the Maker Movement.

Target Vocabulary *3D printer, application, concept, device, do-it-yourself, experiment, failure, hands-on, hardware, inspire, open-source, play around with, resourceful, solve, software*

Content Vocabulary *credit card, satisfying*

Resources Tracks 083–084 (Audio CD/ Website/CPT); CPT: Vocabulary

1 What would you like to make?
Discuss. Then listen and read. 083

Have you ever had a problem you couldn't **solve**? Maybe you went to a shop to look for a solution, but came home empty-handed. More and more, when this situation occurs, people are creating their own **devices** as the solution. It's all part of the Maker Movement, made up of thousands of **resourceful** people who make and fix things, rather than buy them in shops. Makers do all sorts of **hands-on** projects, from building pizza ovens to designing their own drones. For makers, the **do-it-yourself** approach is often more affordable, sustainable and satisfying than simply looking to buy the solution to a problem.

Thanks to technology, it's easier than ever to turn a **concept** into reality. Many makers use the same tools, just in different ways. For example, Arduino® is popular among makers. This **open-source** mini controller is used to develop a variety of electronic devices. Arduino allows people to do anything from creating a talking clock to studying DNA, with very easy-to-use **hardware** and **software**. Raspberry Pi® is another popular maker tool. This mini computer is only the size of a credit card, but it's as powerful as some full-sized computers. People are using Raspberry Pi for a wide variety of **applications**, from creating video games to powering robots.



Warm Up

- **Build background** Say *Today we're going to talk about the Maker Movement.* Write the words on the board and underline the word *Make*. Then say *We all know what it means to make something. Think about things that you've made recently. Make a list of at least five.* Allow time for students to make their lists. Then ask students to share their answers. Write the first ten responses on the board.

- Point to students' responses and say *We make things every day, but sometimes we don't think about why we make them. (Jasmin) said that she made (a sandwich). Why would she make (a sandwich)?* (She's hungry./ She needed lunch for school.) Then say *Sometimes we make things just for fun. Other times we make things to solve problems. (Jasmin) makes (sandwiches) to (solve a problem: hunger).* Tell students to review their lists. Say *Write the reason why you made each thing on your list.* Ask several students to share their reasons.

- Say *As we read about the Maker Movement, think about the reasons for it. Why are people starting to make things? Think about how the reasons mentioned in the reading compared with your own.*

Present 1 2

- Tell students to open their books at pages 112–113. Point to the photo and say *The people in the photo are making something. What are they making?* (a toy figure) *How are they making it?* (using technology, 3D printing) *Why do you think they might be making this?* (for fun, as an experiment) Say *They're using technology to make something new. As we read, think about how technology is changing the way things are made and who can make them.*

- 1 Read the question aloud. Say *If you had access to any type of technology, what would you like to make?* Tell students to discuss the question in pairs and then ask several students to share their answers.



Another key piece of technology for makers are **3D printers**, which allow an average person to generate just about anything. You can even use a 3D printer to build your own 3D printer!

The availability of these technologies **inspires** people to be creative, but technology is only one part of the Maker Movement. Collaboration – whether online or in person – is just as important. This is clear from the growing popularity of Maker Faires, events where people come together to **experiment** in the areas of art, science, engineering and technology.

So, do you have what it takes to become a maker? You need to be creative and willing to **play around with** some new technologies. You should also want to share your ideas with others. Perhaps most importantly, you can't be afraid of **failure**. Innovators hardly ever get it right on the first try. Be flexible, be creative, be co-operative and have fun!

2 **LEARN NEW WORDS** **Listen and repeat.** 084

3 **Work in pairs.** When was the last time you made something? What did you make? What tools did you use? Did anyone help you? Who?

VOCABULARY **113**

BE THE EXPERT

Our World in Context

American innovator Charles (Chuck) Hall invented 3D printing. Although 3D printing is considered state-of-the-art manufacturing technology, Chuck actually created the first 3D-printed objects in 1983. Three-dimensional printing has changed a lot since this early development. At first, the products would shrink and distort because of the type of materials used in the printer. Now a variety of materials and techniques have been developed for 3D printing, allowing for more accurate, less fragile products.

- Play **Track 083** and tell students to listen and read. Discuss the reading with students. Ask them to respond to the following:
  Why are people getting into the Maker Movement? (Making can be more affordable, sustainable and satisfying.)
  Name two devices that are useful for makers. (Arduino and Raspberry Pi)
  What does a 3D printer allow you to do? (build just about anything)
  How should you be if you want to be part of the Maker Movement? (flexible, creative, willing to accept failure)
- 2 **LEARN NEW WORDS** Play **Track 084**. Tell students to listen and repeat. Then tell students to work in pairs to practise pronouncing the words together.
- Play **Track 084** a second time, this time pausing after each word. Tell partners to take turns using each word in a sentence about themselves or their own experiences.

Practise 3 4 5

- 3 Read the questions aloud. Say *We already listed things that we've made at the beginning of the lesson. Some of you may have listed simple things, like a food or a craft. Others may have listed something more complex. Go back to your list. Add anything that you may have made using technology. Then use something on your list to discuss Activity 3 with your partner.* Allow time for students to do the activity in pairs. Then discuss the questions as a whole class.

VOCABULARY

Objectives
Students will
- practise using vocabulary related to creative problem-solving.
- use a vocabulary strategy to learn new words.

Target Vocabulary *affordable, approach, flexible, innovator*

Vocabulary Strategy Latin roots (*nov, flex*)

Content Vocabulary *headset, lightweight, mind, scanner, success*

Resources Online Workbook/Workbook pages 68–69; Worksheet 4.7.2 (Teacher's Resource CD-ROM/ Website); Tracks 085–086 (Audio CD/ Website/CPT); CPT: Vocabulary

Materials poster paper, timer

4 **Read and write the words from the list.** Make any necessary changes.

3D printer	application	concept	device	failure
hands-on	inspire	play around with	software	solve

When entrepreneur Tan Le was a child, she wanted to move objects with her mind. Now she creates headsets that allow people to do just that. The headsets scan our brains and enable us to ___solve___ problems just by thinking about them! Tan's original ___concept___ was to create a ___device___ that was lightweight and easy to use. She and her team ___played around with___ many different models. Although they encountered problems, it never stopped them from working towards their goal. Tan saw both ___failure___ and success as equal parts of the process. Eventually, she and her team created the first wearable brain scanner using EEG, the Emotiv Insight. The headset has a lot of ___applications___, especially helping people do things with their minds instead of their bodies. The scanner is also important in helping researchers understand how a healthy human brain works.



Tan Le uses her mind to control the robot on the screen.

5 **LEARN NEW WORDS** **Listen to these words and match them to their definitions.** Then listen and repeat. 085 086

affordable	approach	flexible	innovator

___affordable___ 1. not expensive
___flexible___ 2. willing to change or try different things
___innovator___ 3. a person who introduces new ideas
___approach___ 4. a way of doing something

6 **YOU DECIDE** **Choose an activity.**

1. **Work independently.** Use the Internet to learn more about do-it-yourself projects. Make a list of five that interest you. Present your favourite project to the class.
2. **Work in pairs.** Survey at least five other students to determine if they are makers. If they are, what do they make? Why? If they aren't, why not? What would they be interested in making? Report your findings to the class.
3. **Work in groups.** Think of a device or app that could solve a problem you have. Does it exist? If so, describe how it works. If not, explain what could be created and how it would help you.

114 VOCABULARY

- Tell students to turn to page 114. Point to the photo. Say *This is Tan Le. Tan is an inventor and entrepreneur. She has created a high-tech headset. She's wearing it in this photo. Look at Tan and then look at the robot. What do you think this headset does?* Listen to several students' guesses. Then say *We're going to read about Tan's invention as we complete Activity 4.*
- **4** Ask a student to read aloud the instructions for Activity 4. Then ask another student to read the words in the box aloud. Guide students to look at the reading on pages 112–113 to review how each word is used in context. After students review the meaning of each word, tell them to do the activity individually.
- Check students' responses as a class. Say *Tan's headset allows researchers to study the human brain. It also allows people to control things using only their thoughts, not their bodies. Put your hand up if you guessed either of these uses.* Check to see how many students guessed correctly.
- **5** **LEARN NEW WORDS** Play **Track 085** once and tell students to write each word next to the definition. Play it again and tell students

to check their work. Then play **Track 086** and ask students to repeat each word and sentence. Review answers to items 1–4 as a class.

- **Vocabulary strategy** Say *Many words in English have Latin roots. Knowing these roots will help you remember a word's meaning. It will also make it easier to learn other words that share these roots.* Write the word *innovator* on the board. Underline the Latin root *nov*. Say *The root nov means new. An innovator is a person who makes something new.* Give students examples of other words with *nov*, such as *novel (adjective), novice* and *to renovate*. Repeat the instruction with *flex*. Say *The root flex comes from Latin. It means to bend. If you're flexible, you're able to bend.* Give students additional examples of words with *flex*, such as *to flex* and *reflexive*.

Apply 6

- 6 YOU DECIDE Ask students to choose a project. Read aloud the three activity options. Tell students to form pairs or groups if they choose the second or third activity options.
- Guide students who choose the first option to select a do-it-yourself project that they might realistically be able to do. In their presentations, tell them to outline the steps and materials necessary for completing the project.
- Point out to students who choose the second option that the term *maker* doesn't automatically mean that someone is technologically skilled. Remind students that makers combine science, technology, art and engineering.
- Tell students who choose the third option to look for devices in the app store on their phones. Students should read the app's description and online reviews to find out how effective the app is.

Extend

- Tell students to imagine that your town is hosting a Maker Faire. Working in small groups, tell students to create a poster to advertise the event. Tell them to briefly describe what happens at a Maker Faire and show different types of hands-on projects that can be made. Students should use illustrations and text in their posters. Challenge students to use at least six new vocabulary terms in their posters.
- Display students' work in the class. Allow time for all students to look at the posters and offer feedback to each of the groups.
- If time allows, hand out **Worksheet 4.7.2**. Explain that students will use vocabulary to discuss creative problem-solving.

Consolidate

- Write the words *do-it-yourself, innovator* and *device* on the board. Set a timer for one minute. Tell students to write a short summary of what they learnt using the three words. When the timer goes off, tell students to share their summaries.

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Vocabulary Strategy

Latin roots Eighty per cent of English words come from other languages and sixty per cent of those are from Greek and Latin. Knowing the meanings of these roots will help students learn other words that include them. Students are focusing on two Latin roots in this lesson: *nov* which means *new* and *flex* which means *bend*. Point out that the suffix *-ible*, meaning *able to* or *worthy of*, also comes from Latin.

Teaching Tip

Ask students to create a personal dictionary of word parts. As you introduce vocabulary strategies, tell students to write them down in a small notebook. (You can even just staple several small pieces of paper together for this!) Each time students learn new information about word parts, tell them to add it to their dictionaries. Help them organise their dictionaries into categories: prefixes, suffixes, Greek roots, Latin roots and so on. Encourage students to keep the dictionaries as a reference even after your class ends.

Related Word

wink

Formative Assessment

Can students

- identify and use vocabulary related to creative problem-solving?
- Say *Give three words that describe people who choose to make solutions to their problems rather than buy them.*
- use new vocabulary to read about and discuss the Maker Movement?

Say *Describe two technologies that drive the Maker Movement.*

Workbook For additional practice, assign Workbook pages 68–69.

Online Workbook Vocabulary

SPEAKING STRATEGY

Objective
Students will
- ask someone to defend an opinion.

Speaking Strategy Asking someone to defend an opinion

Academic Language *brainstorm, defend*

Content Vocabulary *biscuit cutter*

Resources Online Workbook; Worksheet 4.7.3 (Teacher's Resource CD-ROM/ Website); Tracks 087–088 (Audio CD/ Website/CPT); CPT: Speaking Strategy

Materials foam ball, paper bag, pieces of paper

SPEAKING STRATEGY 087

Asking someone to defend an opinion

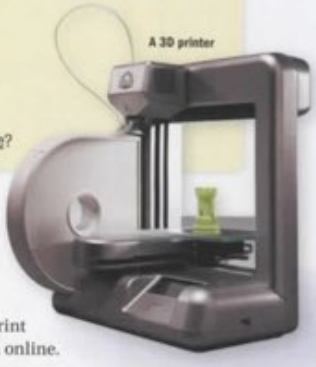
Why do you think it's important to make things yourself?

Are you sure it's cheaper to make it than to buy it?

What makes you think that?

Can you explain why you think we need to create a device?

So you think the Maker Movement is helping people be more creative?



1 **Listen.** How does David's mum ask him to defend his opinions? Write the phrases you hear. 088

2 **Read and complete the dialogue.**

Liz: Dad, look at my biscuit cutter designs. I'm going to print them with the school's 3D printer and then sell them online.

Dad: _____Are you sure_____ that will be OK with your school?

Liz: Yes, I'm sure. Actually, it started as a school project, but I think I could really make some money selling them.

Dad: _____Why do you think_____ people will buy them?

Liz: Well, my teacher really liked my designs. And my friends have already bought some.

Dad: _____Can you explain_____ how you'll do this exactly?

Liz: People could buy the biscuit cutters I have designed and made. Or they could design their own biscuit cutters, and I could print them for them.

Dad: _____So you think_____ the school will be OK with you using *their* 3D printer for *your* business? _____What makes you think that?_____

Liz: Because it's a learning experience for me – and I'll give the school half the profits!

3 **Work in groups.** On separate strips of paper, write three sentences that give an opinion on technology use. Combine the group's papers into a pile. Take turns reading an opinion and asking the group member who wrote it to defend it.



4 **Work in pairs.** Think of a problem you have and brainstorm ways that technology can solve it. Discuss your ideas with a partner. Ask your partner to defend his/her opinions when possible.

Warm Up

- **Revisit** Say *In Unit 4, you learnt to defend your opinion. Remember, when you defend your opinion, you give facts to support it.* Say *I think the Maker Movement is really becoming popular.* Repeat and say *This is my opinion. I'll defend it with additional information.* Say *The Maker Movement started in 2006. By 2014, there were over 100 Maker Faires worldwide.*

- Tell students to open their books at page 63 and review the phrases used for defending an opinion. Say *To defend my opinion, I use one of these phrases to present my facts.* Give an example. Say *As far as I know, there were over 100 Maker Faires worldwide in 2014.* Ask students to use the other phrases on page 63 to defend this same opinion. They can use your facts or any that they know about the Maker Movement.

Present 1

- Say *Sometimes people give opinions that might not seem true or logical. It's OK to ask someone to defend an opinion. We'll look at some polite phrases for asking someone to provide facts to defend an opinion.*

- Tell students to open their books at page 115 and scan the phrases in the yellow box. Then play **Track 087.**

- 1 Say *Now we'll listen to a conversation between a boy and his mother.* Play **Track 088** and tell students to write the phrases that the mother uses to ask her son to defend his opinions.

Practise 2

- 2 Direct students' attention to Activity 2. Say *In this conversation, a girl is defending her opinions to her father.*

- Tell students to scan the dialogue. If necessary, explain that a *biscuit cutter* is used to make biscuits into different shapes. Tell students to complete the activity independently. Ask a pair of students to read the dialogue aloud.

Apply 3 4

- 3 Read the instructions aloud. Divide students into groups of three or four.
- **Give examples** Say *I want to give opinions that I can back up with facts and information. I want to say more than* 3D printers are cool. *I want to give an opinion like* 3D printers will change the way we manufacture products. *Notice that I give facts to back my opinion.* Give more examples of opinions about technology. Tell students to write their opinions on separate pieces of paper.
- Tell students to mix their opinions and put them face-down in a pile. Ask about their discussions and tell them to defend their opinions.
- 4 Read the instructions aloud. Point out that students can use information from Activity 3 to inform this discussion. After their discussion, ask several pairs to talk about their problem and solution for the class. Ask them to defend their opinions.

Extend

- Create ten scenarios for conversations between a parent and a teen. Scenarios could include borrowing the car, getting money, getting a bad school report, and so on. Write each scenario on a separate piece of paper and put them in a paper bag.
- Tell students to work in pairs. Explain that they will perform an improvised sketch. With another student, model taking a piece of paper out of the bag, quickly assigning roles and then acting out a dialogue based on the scenario. In each dialogue, the teen should give an opinion about the topic (*I need a weekly allowance, grades don't matter*, etc.) and the parent should ask the teen to defend the opinion. The teen should then respond.
- Tell partners to pick a scenario from the bag. Set a timer for 30 seconds. During this time, the students should plan their dialogue. Then each pair can act out their sketch in front of the class.
- If time allows, hand out **Worksheet 4.7.3**. Explain that students will use this worksheet to practise asking others to defend an opinion.

Consolidate

- Ask students to write an opinion about one of the following topics: celebrities, sports or school subjects.
- Hold up a foam ball. Say *Listen to your classmates' opinions. After each student gives an opinion, I'll throw the ball to another student. Pay attention! I won't say who I'm throwing it to. The person who catches the ball will have to ask the first student to defend his or her opinion. Then the first student should respond.* Continue for as long as time allows.

BE THE EXPERT

Strategy in Depth

Students have already learnt to ask, give and defend their opinions. In this lesson, students build upon these skills. They express their opinions and then are asked to defend them, which they then must do. Students can combine expressions from previous lessons into complete dialogues. For example:

A: In 20 years, people won't be using computers anymore. What do you think?

B: I'm not really sure. What makes you think that?

A: Well, I read that mobile devices are just as effective as regular computers. And as far as I know, a lot of people have wearable technology. I just don't think we'll need computers.

B: I don't agree.

A: So you think that new technology isn't changing our habits?

B: It is, but people may still prefer a traditional computer for work. All I'm saying is that new technology won't replace computers. It'll be used with them.

Point out that when students are in formal situations, they might want to plan their speech carefully, so as not to seem disrespectful. Explain that they might seem a little more polite if they use a phrase like *I'm sorry, I'm not sure I understand* or *Are you saying that ...?*

Formative Assessment

Can students

- ask someone to defend an opinion?

Say *I think that 3D printers are really cool.* Ask students to ask you to defend your opinion.

Online Workbook Speaking Strategy

GRAMMAR 1

Objectives

Students will

- use *wish* and *if only* to express wishes and regrets.
- use *wish* and *if only* to talk about EEG headsets.
- identify and use new words related to a music project that used an EEG headset.

Grammar *Wish* and *if only*: Expressing wishes and regrets

Target Vocabulary *disabled, interpret, transform, wireless*

Academic Language *regret*

Content Vocabulary *demonstration*

Resources Online Workbook/Workbook pages 70–71; Tracks 089–093 (Audio CD/Website/CPT); CPT: Grammar 1

Materials paper clips

GRAMMAR 089

***Wish* and *if only*: Expressing wishes and regrets**

I wish I were at the technology fair at the moment.
I wish my teacher had told me about the fair before today.
I wish the invitations would go directly to students.
If only we were at the technology fair! We could see a demonstration of the EEG headset.
If only Tan had been invited to our school! She could have shown us her invention here.

1 Listen. Listen as the speaker introduces Tan and her Emotiv Insight headset at a technology fair. Select the most logical reaction from each pair, based on what you heard. 090

1. **a.** I wish I knew what Tan did.
   b. I wish I could experiment with Tan's headset.
2. **a.** I can't believe the technology is open-source. If only I knew how to use it correctly.
   b. If only the technology were open-source! Then anyone could access it.
3. **a.** I wish Tan would develop ways for disabled people to use the headset.
   b. If only every disabled person had one of these headsets!
4. **a.** If only drivers had used the headset to communicate with each other. Then the accident wouldn't have happened.
   b. If only drivers had used the headset to help them pay attention. Then the accident wouldn't have happened.
5. **a.** I wish I were part of the experiment to have my thoughts 3D printed!
   b. I wish I were a child so that I could get a toy headset.

2 Work independently. Listen to the audio again. Imagine that you had an EEG headset for a day. Write sentences expressing wishes and regrets about the experience. 091

1. *If only I had been given an EEG headset to keep! I would have shown it to everyone.*
2. _____
3. _____



116 GRAMMAR

Warm Up

- **Set the stage** Role-play a very disorganised teacher. Prepare by hiding things that you normally use at the beginning of class, such as photocopied assignments, your book and chalk or pen. First, rush into the classroom with some books and papers in your hands. Let some of them fall to the floor. Go to the front of the room and, out-of-breath, say *Let's begin. Today we're going to learn to express regrets.* Act as though you're going to write this on the board and then look around for your chalk or pen. Say *Where is the (pen)? Can anyone see my (pen)?* Repeat this using your book and any other classroom materials.
- Then say *That wasn't a good start to the class, was it? What went wrong?* Students might point out that you were late, you weren't prepared, you were dropping your materials and you hadn't been able to find what you needed to teach the class. Write what they say on the board.
- Once you have a complete list, say *This really was a bad start to the class. If only I had arrived on time! I wish I hadn't dropped all of*

3 **Work in pairs.** Rewrite the sentences below to express wishes and regrets.

Possible answers:

1. I never learnt to programme computers. If only I had learnt to programme computers.
2. My brother doesn't let me use his computer. I wish my brother would let me use his computer.
3. You broke my smartphone. Now we can't play video games! If only you hadn't broken my smartphone.
4. My school didn't buy a 3D printer this year. I wish my school had bought a 3D printer this year.

4 **LEARN NEW WORDS** **Listen to information about an interesting use for EEG headsets.** Then listen and repeat. 2.092 003



British musician Daniel Stein, widely known as DJ Fresh, organised the *Mindtunes* project. In it, he helped **disabled** musicians **transform** their thoughts into music. **Wireless** EEG headsets **interpret** signals from their brains. They link these signals to electronic sounds, which the musicians can 'play' with their minds.

5 **Work in pairs.** Write sentences about wishes or regrets using the words provided.

Possible answers:

1. interpret my thoughts If only I had a headset to interpret my thoughts.
2. transform into reality I wish I had invented a device to transform my imagination into reality.
3. use a wireless device If only I could use a wireless device to communicate with my computer.
4. help disabled people I wish I were able to help disabled people with a project like Mindtunes.

6 **Work in groups.** Write two things that you wish you had or could do. Write two things that you wish you had done. Discuss your wishes and regrets with your group.

GRAMMAR **117**

my papers. I wish I knew where my book was. I wish they would give us more time to prepare for class! Continue until you've expressed regrets about each of the points students raised. Then say *Everybody has bad days – days when they wish things were different. This means you have regrets. I just expressed regrets for my poor entrance. Today, you're going to learn to express regrets, too.*

Present

- Ask students to open their books at pages 116–117. Tell students to scan the yellow box at the top of page 116. Say *Each of these sentences is expressing a wish or a regret. Let's listen.* Play **Track 089** once and tell students to listen to the examples. Then play **Track 089** again. Pause after the first example sentence and ask *Is this person at the technology fair?* (no) Say *That's right. She wishes she were at the fair, but she's not.* Continue to play **Track 089**, pausing after each example sentence. Each time, point out that the sentence is saying something that someone wishes were true.

BE THE EXPERT

Grammar in Depth

The verb *wish* and the phrase *if only* are used to talk about regrets, both past and present. When we use *I wish* to express present regrets, it's followed by the past simple: *I wish this came with instructions.* To talk about past regrets, *I wish* and *If only* are followed by the past perfect: *I wish / If only you had called before you came.* When *I wish* is followed by *would*, it signals that something bothers us and we'd like to change it, but we can't: *I wish they would communicate better.*

About the Photo

The woman in the photo is wearing the *Insight* EEG headset, a model developed by Emotiv, the company that Tan Le co-founded. The headset works to monitor mental well-being and measure brain performance. It has the ability to track a wearer's level of attention, interest, excitement, relaxation and stress. The headset works with tools that allow developers and researchers to use its data in a variety of ways.



- **Explain** Say *We use wish and if only to talk about wishes and regrets. What we are speaking about is not actually happening, but we wish that it would happen or that something different had happened in the past.* Write the following sentences on the board:

> Present regret: *I wish / If only we were at the fair.*
>
> Past regret: *I wish / If only you had arrived on time.*
>
> Present wish: *I wish somebody would tell me what to do.*

- Point to the first line and read it twice: once with *I wish* and once with *If only*. Say *These two phrases are used to express a present regret. We're not at the fair, but we wish we were; we regret not being at the fair. Notice the second verb is in the past simple.* Underline *were*. Give additional examples of present regrets.

- Next, point to the second line and say *Here we're expressing regrets about something that already happened. You didn't arrive on time – you were late. So this is a past regret. To express a past regret, we use the past perfect.* Underline *had arrived*. Give additional examples of past regrets.

- Point to the third line and say *When we use wish followed by would, we're saying that we wish things were different. In this sentence, nobody tells me what to do and that bothers me. So, I use I wish followed by would and a main verb to express how I wish things could be different.* Underline *would tell* and give additional examples.

Practise 1 2 3

- 1 Say *We're going to imagine being at a technology fair. Listen as a speaker introduces Tan Le and her technology.* Play **Track 090** and tell students to just listen. Then direct students' attention to the instructions. Read them aloud as students follow along. Then tell students to scan the sentences. Say *As you listen again, you're going to choose the best response from each pair. The responses are based on what the speaker says, not your own feelings.* Play **Track 090** a second time and tell students to mark the appropriate response. When they finish, review their answers as a class.

- 2 Ask *Based on what you heard about the Emotiv Insight headset, would you like to have one? Why or why not?* Listen to several students' answers and then say *We're going to imagine that we have one of Tan's headsets for a day.* Ask a student to read the instructions and the model aloud. Play **Track 091**. Then give students time to think of what they'd do with an EEG headset or why they might want it for more than one day. Tell them to write their sentences independently. Walk around the room to make sure they are using *wish* and *if only* correctly. Then ask students to share their responses with the class.

- 3 Direct attention to the instructions and read them aloud. Say *Notice the verb tense in the original sentence. Is it in the present or the past? Remember, with a present wish or regret, we use would or we use the past simple. With a past regret, we use the past perfect.* Tell students to scan the sentences first to check the tense. Then tell them to work in pairs to write sentences.

Apply 4 5 6

- 4 **LEARN NEW WORDS** Say *We've already learnt about uses for EEG headsets. Now, we're going to listen to learn about a specific project that used Tan's headset to make music.*

- Read the instructions aloud and then play **Track 092**. Say *You've heard the music created during the Mindtunes project. Did you like it? Why or why not?* Listen to several students' answers. Then ask a student to read the summary on the page aloud.

- Say *Let's listen to the new words. After each word and sentence, repeat what you hear.* Play **Track 093** and ask students to repeat each new word and sentence.

- **5 Model** Read the instructions aloud and review the meanings of the new vocabulary words. Model completing the first item. Read the phrase aloud and say *I don't have anything or know anyone that can interpret my thoughts, but that would be pretty cool if I did. If only I had a headset to interpret my thoughts – I could move things with my mind!* Write the wish on the board for students' reference. Then tell students to work with a partner to complete the activity. Point out that pairs can write different answers depending on each partner's feeling or opinion about the topic.

- **6** Divide students into groups of three or four to do this activity. Point out that students can keep the topics light and not too personal. Remind all students to be respectful as they listen to one another's wishes and regrets. When students finish, ask each group to share one or two sentences from their discussion.

Extend

- Tell students to work in groups of three to create a spinner similar to the one on page 153. Students draw a circle and divide it into six sections. In each section, tell students to write a topic of their choice. Topics could include fashion, food, school, friends, celebrities or video games.

- Give each group a paper clip and tell them to use it on the spinner. Students should take turns spinning and then stating a wish or regret about the topic. For example, a student who lands on *fashion* might say *If only I had high-heeled trainers* or *I wish they would make more comfortable dresses.*

- Allow time for groups to play until each student has expressed three wishes or regrets.

Consolidate

- Say *Now that the lesson is over, think about what happened. What could have been done better? Write a sentence expressing a wish or a regret about today's lesson or a change you'd like to see in class in general.*

- Ask students to write their sentence on a small piece of paper. Then collect the pieces of paper and quickly review them, removing any inappropriate sentences. Choose two or three of the best sentences to read aloud to the class.

BE THE EXPERT

About the Photo

The photo shows Daniel Stein or DJ Fresh, a popular British DJ who has sold over 2.5 million records and has produced two number 1 singles. During the Mindtunes project, he worked with neurotechnology expert Julien Castet, as well as three disabled musicians: Andy Walker, Jo Portois and Mark Rowland. The musicians' emotions were transformed into brain waves and the brain waves were then transformed into sound waves. Then DJ Fresh took the resulting data and collaborated with the musicians to create the track. The project was honored by Queen Elizabeth's Foundation for Disabled People and all proceeds from the project are donated to this foundation.

Formative Assessment

Can students

- use *wish* and *if only* to express wishes and regrets?

  Ask *Where do you wish you were right now? Where do you wish you had already gone?*

- use *wish* and *if only* to talk about EEG headsets?

  Say *Say what you would do if only you had an Emotiv Insight headset.*

- identify and use new words related to a music project that used an EEG headset?

  Ask *Who did the* Mindtunes *project help? How did it help them?*

Workbook For additional practice, assign Workbook pages 70–71.

Online Workbook Grammar 1

READING

Objectives
Students will
- read about the failures of very successful people.
- identify and use new words from the reading.
- take notes and categorise information to better understand a text.

Reading Strategy Take notes

Target Vocabulary *amount to, discourage, persistent, success, turn away*

Vocabulary Strategy Identify antonyms

Academic Language *categorise, take notes*

Content Vocabulary *apply, clerk, genius, graduation, incredible, lazy, manuscript, outcome, publisher, repair, series, translate*

Resources Online Workbook/Workbook pages 72–73; Tracks 094–095 (Audio CD/Website/CPT); Worksheet 4.7.4, Graphic Organiser: Three-column table (Teacher's Resource CD-ROM/ Website); CPT: Reading

Materials felt tips, poster paper, masking tape (one roll per group), measuring tape, newspaper (at least 10–15 pages per group), a timer



1 BEFORE YOU READ **Discuss in pairs.** Based on the title and the photos, what do you think you'll learn in this reading?

2 LEARN NEW WORDS **Find these words in the reading.** Use a dictionary to find their meanings. Think of antonyms you know for any of the words. Then listen and repeat. 094

amount to success | discourage | persistent | turn away

3 WHILE YOU READ **Take notes on the failures and successes of the people described.** 095

4 AFTER YOU READ **Work in pairs to answer the questions.**

1. What did J.K. Rowling think of herself before she became famous?
2. Describe the success of the *Harry Potter* series.
3. What did Albert Einstein's teachers think of him?
4. Why couldn't Einstein find a job after graduation?
5. What was the first electronic device that Masaru Ibuka and Akio Morita made? What was the outcome?
6. What product made their company successful?

5 **Work in pairs.** Using your notes, create a table to categorise the failures and successes of each person described in the text.

118 READING

GREAT

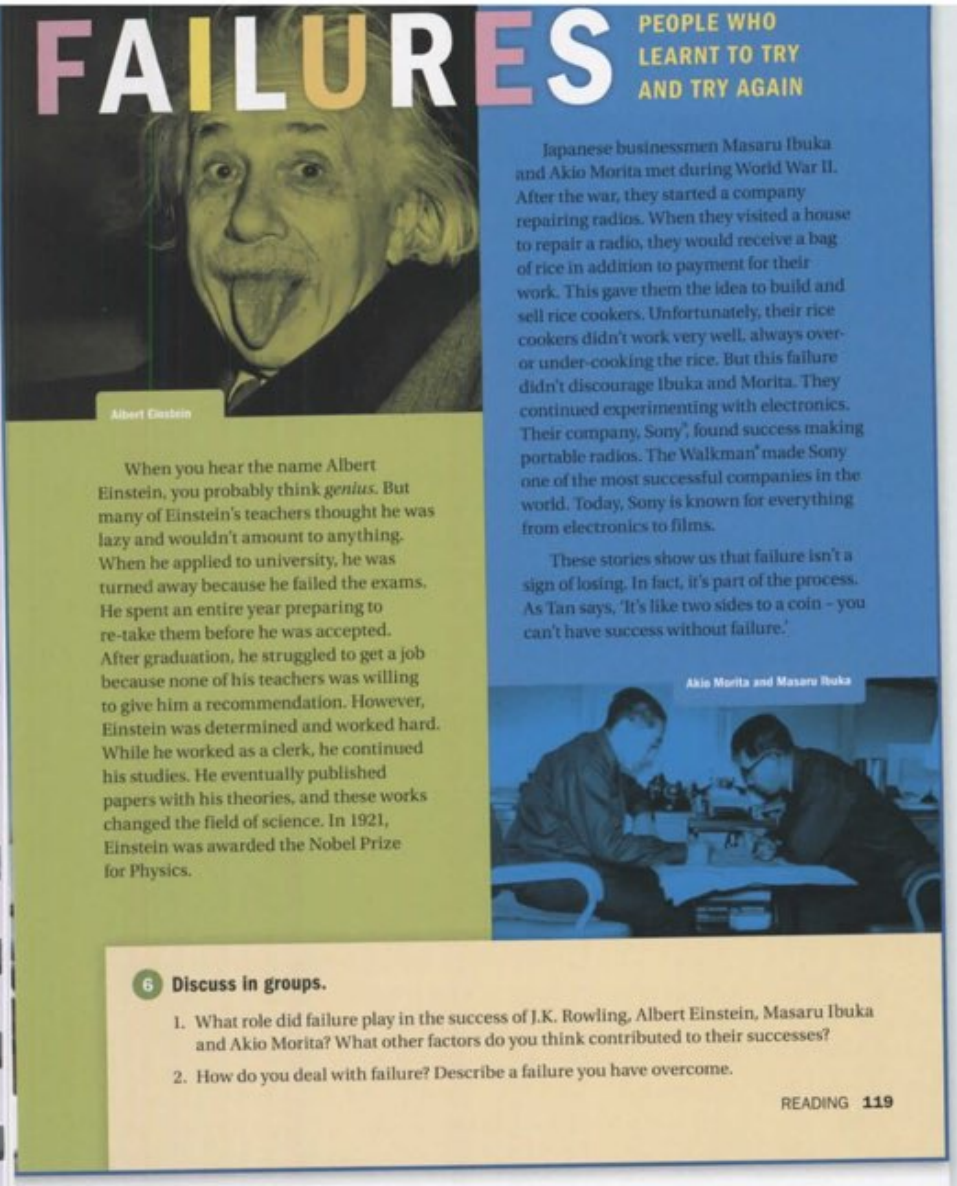
You've learnt about Tan Le's incredible innovation, but that didn't come instantly. Tan and her team tried many times before finding success. And Tan's not alone. In fact, for many, success is the result of overcoming great failure.

J.K. Rowling's *Harry Potter* books have sold more than 450 million copies, and have been translated into 77 languages. But before she became famous, Rowling said of herself, 'I was as poor as it is possible to be .... I was the biggest failure I knew.' She sent her first book to 12 publishers, but they all rejected it. However, Rowling was persistent. After a year of trying, a publisher finally accepted her manuscript. *Harry Potter and the Philosopher's Stone* became the first novel in a series that would become the best-selling young adult books of all time.

J.K. Rowling

Warm Up

- **Set the stage** Say *Now we're going to talk about failure and how you can learn from failure. To better understand failure, we're going to do a task in which we might fail. Are you ready?* Divide students into groups of four. Give each group some masking tape and some newspaper.
- Say *I want you to build a tower using only tape and newspaper. Your tower should be at least one metre (3.3 ft.) tall. You will have five minutes to do this task.* Set a timer for five minutes. Tell each group to work to build a tower.
- Once the timer goes off, walk around the room to measure the towers. If a group's tower is not one metre tall, the group has failed. Once you label the group a *success* or a *failure*, tell students to talk in their group about what worked and what didn't.
- Say *(Some of) you failed at this task. What methods worked for you? What didn't work? What caused your group to fail (or succeed)?* After several students provide answers, say *Although your group might*



FAILURES

PEOPLE WHO LEARNT TO TRY AND TRY AGAIN

Albert Einstein

When you hear the name Albert Einstein, you probably think *genius*. But many of Einstein's teachers thought he was lazy and wouldn't amount to anything. When he applied to university, he was turned away because he failed the exams. He spent an entire year preparing to re-take them before he was accepted. After graduation, he struggled to get a job because none of his teachers was willing to give him a recommendation. However, Einstein was determined and worked hard. While he worked as a clerk, he continued his studies. He eventually published papers with his theories, and these works changed the field of science. In 1921, Einstein was awarded the Nobel Prize for Physics.

Japanese businessmen Masaru Ibuka and Akio Morita met during World War II. After the war, they started a company repairing radios. When they visited a house to repair a radio, they would receive a bag of rice in addition to payment for their work. This gave them the idea to build and sell rice cookers. Unfortunately, their rice cookers didn't work very well, always over- or under-cooking the rice. But this failure didn't discourage Ibuka and Morita. They continued experimenting with electronics. Their company, Sony®, found success making portable radios. The Walkman® made Sony one of the most successful companies in the world. Today, Sony is known for everything from electronics to films.

These stories show us that failure isn't a sign of losing. In fact, it's part of the process. As Tan says, 'It's like two sides to a coin – you can't have success without failure.'

Akio Morita and Masaru Ibuka

6 Discuss in groups.

1. What role did failure play in the success of J.K. Rowling, Albert Einstein, Masaru Ibuka and Akio Morita? What other factors do you think contributed to their successes?
2. How do you deal with failure? Describe a failure you have overcome.

READING **119**

have failed, by talking about what worked and what didn't work, you're showing that you learnt from your mistakes. And if you had to do this task again, you might do it better. Now we're going to read about how failure helps people to succeed.

Before You Read 1 2

- Open your book at pages 118–119 and hold it up so that students can see the photos but not the captions. Ask *Do you recognise any of these people? If so, who? What are they known for?* (J.K. Rowling, author; Albert Einstein, theoretical physicist; Akio Morita and Masaru Ibuka, founders of Sony)
- 1 Tell students to open their books at pages 118–119. Say *We've talked about who these people are. And we've talked about failure. Now let's use this information to make predictions.* Ask a student to read the instructions for Activity 1. Then allow time for students to discuss the prediction in pairs. Call on one or two students to summarise their predictions.

BE THE EXPERT

Strategy in Depth

Take notes Classifying or categorising information in a text can help students better comprehend the reading. First, the simple act of taking notes makes students engage with the text instead of just reading over it. Organising the ideas into categories also helps students to better grasp different topics or ideas being presented in a text. When giving students a text that could be broken down into different categories, encourage them to think of what makes up a category (*i.e.*, Each person's experiences were the categories in this reading.) and what information they're looking to find out about each category (*i.e.*, failure and success for this reading). Graphic organisers such as T-charts, three-column tables or pie charts are useful in helping students organise information from a text into different categories.

Vocabulary Strategy

Identify antonyms In a reading, students may have an easier time identifying the meaning of a word in context if they are familiar with its antonyms. For example, students may easily recognise that *discourage* is the antonym of *encourage* based on familiarity with both the word parts of each word and knowledge of the term *encourage*. Antonyms are the same part of speech and are generally used in similar ways in a sentence, just with different meanings. When students learn antonyms as word pairs, they are essentially learning two vocabulary terms at once.



- 2 **LEARN NEW WORDS** Say *We're going to look at some new words that will help us learn about these people and their stories.* Read aloud the first term, *amount to* and ask students to repeat it. Then tell them to scan the reading to look for it and talk about what it might mean. Repeat this with the other words.

- **Vocabulary strategy** Write the word *success* on the board. Ask a student to read aloud a sentence from the reading in which the word appears. Then ask *What do you think this word means?* Listen to students' guesses and then say *Success is the antonym, or opposite, of* failure. *We've already learnt that* failure *means* loss *or* lack of achievement. *Success then means* winning *or* achievement. Repeat this instruction for words on the list with antonyms familiar to students (discourage/encourage; turn away/accept). Guide students to find antonyms of the remaining words using a dictionary or thesaurus.

- Play **Track 094**. Ask students to listen and repeat each word and sentence. Check that students understand each word's meaning.

While You Read 3

- 3 Say *Now we're going to read about four very successful people who did not achieve success without first experiencing failure.* Play **Track 095** and tell students to follow along.

- Say *Let's re-read the text. This time, I want you to take notes. Write each person's name and list information about that person as you read.* Ask a volunteer to begin reading. After the first sentence of the second paragraph, tell the student to pause. Say *This paragraph is about J.K. Rowling. I'm going to write her name.* Write the name on the board. Then ask the student to continue reading the next sentence. Tell the student to pause again. Say *OK, let's take notes on important information about J.K. Rowling. When we take notes, we don't copy whole sentences. We only write the most important information. For example, Rowling wrote the* Harry Potter *series. I'll write* Harry Potter. *It sold 450 million copies,* so I'll write that number.

J.K. Rowling:
- *Harry Potter*
- 450 million copies

- Continue to model taking notes for students as they read about J.K. Rowling. Then tell students to work in pairs to re-read and take notes on the rest of the reading. Walk around the room as they take notes to make sure they're only writing the most important information.

After You Read 4 5 6

- 4 Put students into pairs. Tell them to discuss their answers to the questions. Remind students to use their notes to help them. Review their responses as a class.

- 5 Put students into pairs and give each pair a copy of the Three-column table graphic organiser. Say *Let's categorise information from the reading. When you categorise, you organise information according to related topics. Organising the information will help you to make sense of it and to better understand the reading.* Tell students to take out their notes from Activity 3. Say *There are three topics in this reading: J.K. Rowling, Albert Einstein and Akio Morita and Masaru Ibuka. Let's write their names above the columns of our tables.* Hold your own complete table up and model folding it in half so that it separates the table into a top and a bottom. Each half should have three rows on the graphic organiser table. Say *We learnt a little about each person's failure and success, too. Let's write* failure *on the top left-hand side of the table. Let's write* success *on the bottom half.* Draw the table on the board.

	Rowling	Einstein	Morita and Ibuka
failure	· sent to 12 publishers		
success	· 450 million copies of *Harry Potter* books sold		

- Say *Use your notes to categorise information about each person's successes and failures. Notice that there are three rows for each, so try to identify three ways in which the person experienced failure and three ways that the person was successful.*

- Allow time for pairs to organise information. Then review their work. Ask them to respond to statements such as *Tell me about Einstein's successes.*

- 6 Tell pairs from Activity 5 to join together with another pair to form groups of four. Students should refer to their tables to answer question 1. For question 2, remind students to consider academic or athletic failures. Encourage students to be sensitive. Point out that if students are uncomfortable discussing the question, they can talk about a failure that someone they know has overcome.

Extend

- Say *Imagine that we're going to do a school-wide campaign about the importance of persistence and not giving up. You're going to create a poster or a TV advertisement about this topic that you would share in school.*

- Divide students into small groups and tell them to choose how they'd like to present their announcement: in a poster or in a TV advertisement. Give students who choose the poster appropriate materials: felt tips, poster paper, etc.

- Allow time for students to create their announcements. Remind them to use evidence from the reading and their own experiences. Point out that students should also use the new vocabulary from the reading. When students finish, tell them to display their work or act out their advertisement in class.

- **Worksheet** If time allows, hand out **Worksheet 3.7.4** in class. Remind students to review the new words presented on page 118.

Consolidate

- Say *We're going to summarise the reading, one topic at a time. I'll start by saying a sentence. Listen to my sentence. Then, if I am describing the person's success, put your left hand up. If I'm describing his or her failure, put your right hand up.*

- Say *J.K. Rowling's books were translated into 77 languages.* Students should put their left hands up to signal success. Next, ask a student to give more information about Rowling and tell the class to put the appropriate hand up. Continue this, asking different students each time, for as long as time allows or until the entire reading has been summarised.

BE THE EXPERT

Teaching Tip

Reading will help students acquire vocabulary in context. While there are many opportunities for reading in the text, it's important to also offer a variety of high-interest materials that students can read independently. Encourage students' reading by offering supplemental reading materials that are relevant to the topic being studied. For example, for this lesson, you could find and print short biographies of other famous people that students know and admire who have similar stories. Keep copies of these texts in a classroom library and allow students to take them home or read in class when time allows.

Answer Key

Comprehension 4

1. She was poor. She thought she was a failure.
2. The books have sold more than 450 million copies and are the best-selling young adult books of all time.
3. They thought he was lazy and wouldn't amount to anything.
4. because none of his teachers was willing to recommend him
5. a rice cooker; It failed because it always over- or under-cooked the rice.
6. the Sony Walkman®

Formative Assessment

Can students

- read about the failures of very successful people?

  Ask *How did Einstein fail? How did he succeed?*

- identify and use new words from the reading?

  Ask students to identify antonyms for the words *accept, encourage* and *failure.*

- categorise information to better understand the reading?

  Ask *What were the three topics we read about? What two categories of information did we identify for each topic?*

Workbook For additional practice, assign Workbook pages 72–73.

Online Workbook Reading

VIDEO

Objectives
Students will
- identify Sanga Moses and the problem he faced.
- identify and explain how Sanga is an energy innovator.
- apply the message of the video to their own lives.

Academic Language *predict*

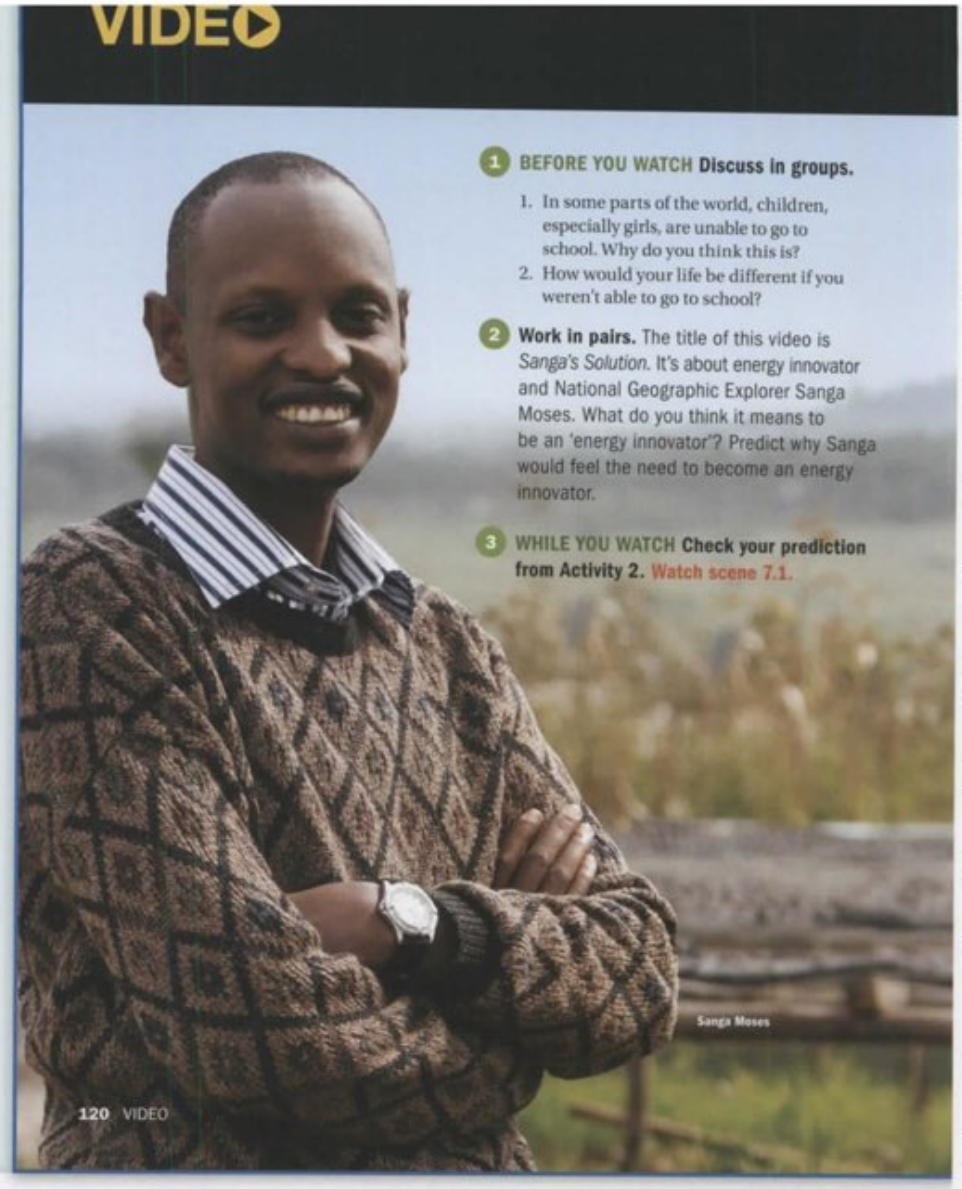
Content Vocabulary *accountant, bundle, business, charcoal, childhood, firewood, frugal, fuel, graduate, kiln, sugarcane husk*

Resources Video scene 7.1 (DVD/Website/CPT); Online Workbook; Graphic organiser: Venn diagram (Teacher's Resource CD-ROM/Website); CPT: Video

Answer Key

Comprehension 5

1. eco-fuel or charcoal made from sugarcane husks or waste
2. It helps coal farmers make money; it empowers women by letting them attend school and make money; it helps all the residents by saving the forest.

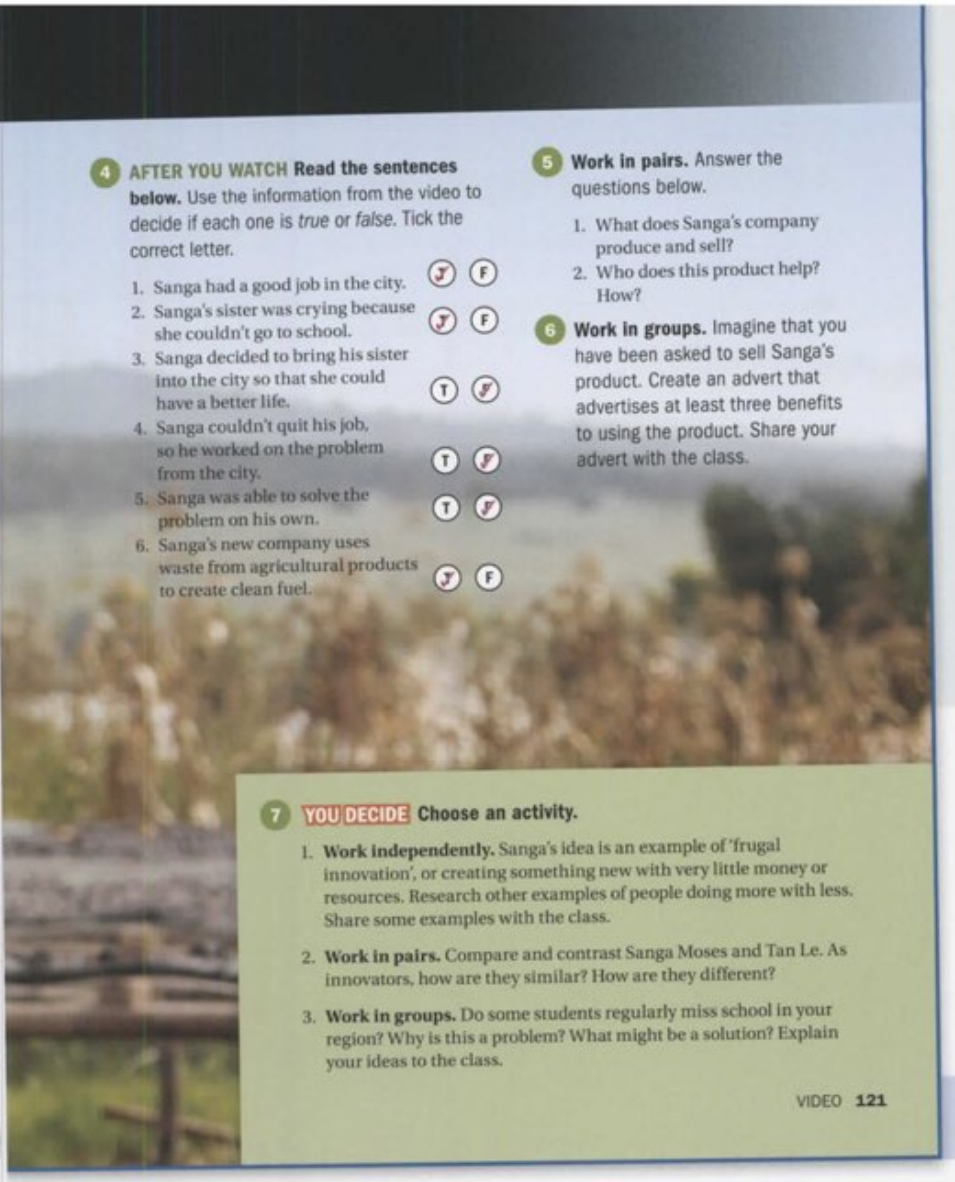


Before You Watch 1 2

- 1 Tell students to turn to pages 120–121. Say *Remember, we're studying creative problem-solving. One of the problems that we're going to think about today is missing school. Why do people miss school?* Listen to responses from several students. Then read aloud the instructions for Activity 1. Ask a student to read aloud the questions. After students discuss the questions in groups, ask a representative from each group to summarise that group's discussion for the class.
- 2 Read aloud the instructions. Write the words *energy innovator* on the board. Point to *energy* and ask *What gives us energy to use in our homes? In our cars? In our schools?* (wind, sun, electricity, heat, coal) Then say *In Unit 4, we talked about how consuming a lot of energy can be harmful for the environment. With that in mind, what do you think an* energy innovator *is?* (a person who creates a new source of energy)
- Remind students of their discussion from Activity 1. Guide students to include information about education in their predictions about why Sanga Moses felt the need to become an energy innovator. Tell students to write their predictions on a piece of paper.

While You Watch 3

- 3 Before you play the video, tell students to review their predictions. Say *As you watch the video, check your predictions and add any important new information to your notes.* Play **Video scene 7.1** and tell students to take notes.



4 AFTER YOU WATCH Read the sentences below. Use the information from the video to decide if each one is *true* or *false*. Tick the correct letter.

1. Sanga had a good job in the city. T F
2. Sanga's sister was crying because she couldn't go to school. T F
3. Sanga decided to bring his sister into the city so that she could have a better life. T F
4. Sanga couldn't quit his job, so he worked on the problem from the city. T F
5. Sanga was able to solve the problem on his own. T F
6. Sanga's new company uses waste from agricultural products to create clean fuel. T F

5 Work in pairs. Answer the questions below.

1. What does Sanga's company produce and sell?
2. Who does this product help? How?

6 Work in groups. Imagine that you have been asked to sell Sanga's product. Create an advert that advertises at least three benefits to using the product. Share your advert with the class.

7 YOU DECIDE Choose an activity.

1. **Work independently.** Sanga's idea is an example of 'frugal innovation', or creating something new with very little money or resources. Research other examples of people doing more with less. Share some examples with the class.
2. **Work in pairs.** Compare and contrast Sanga Moses and Tan Le. As innovators, how are they similar? How are they different?
3. **Work in groups.** Do some students regularly miss school in your region? Why is this a problem? What might be a solution? Explain your ideas to the class.

VIDEO 121

BE THE EXPERT

Our World in Context

One of the problems that Sanga's solution helps to address is the problem of deforestation or the cutting down of most or all of the trees in an area. Uganda's population has more than doubled in the last two decades, making the demand for wood unsustainable. Uganda has already lost 75 per cent of its forests. Sanga's eco-friendly fuel gives Africans an alternate source of energy and helps slow the region's deforestation.

Formative Assessment

Can students

- identify Sanga Moses and the problem he faced?

  Ask *What did Sanga want to help his sister do?*
- identify and explain how Sanga is an energy innovator?

  Ask *How was Sanga's energy source innovative?*

Online Workbook Video

After You Watch 4 5 6 7

- 4 Students can complete this activity independently or in pairs. As you review, tell students to correct false statements. If necessary, play **Video scene 7.1** again so that students can get any additional information needed to correct false statements.
- 5 Tell students to read the questions and then discuss them in pairs. Point out that there's more than one answer to the second question. After students finish, review their responses as a class.
- 6 Read aloud the instructions. Point out that students could do a TV, radio or print advert. Encourage students to identify three benefits from the video and add any additional benefits that they see from using this product. Allow time for students to share their work in class.
- 7 YOU DECIDE Ask students to choose a project. Read aloud all of the options. For Option 1, explain that *frugal* is a word used to describe someone who tries to save money. Tell students who choose this option to find at least three examples. Students can prepare a summary of what they learn. Or they can share and describe photos, websites or videos that show frugal innovation.
- You may want to provide a copy of the Venn diagram graphic organiser to help students who choose Option 2.
- Students who choose Option 3 can use anecdotes as well as statistics to answer the questions. Encourage students to go online to learn about attendance at local schools.

GRAMMAR 2

Objective
Students will
- use adverbs to express different levels of intensity.

Grammar Adverbs: Expressing different levels of intensity

Academic Language *comment, intensity*

Content Vocabulary *Alzheimer's, carer, clever, flashing, innovative, sensor*

Pronunciation Variations in stress and intonation

Resources Online Workbook/Workbook pages 74–75; Worksheet 4.7.5, Pronunciation Answer Key (Teacher's Resource CD-ROM/Website); Tracks 096–098, 128–129 (Audio CD/ Website/CPT); CPT: Grammar 2 and Pronunciation

Materials pieces of paper (12 per group), paper bag

GRAMMAR 096

Adverbs: Expressing different levels of intensity

Inventor Kelvin Doe is **so** clever.	But he is **rather** shy.
His inventions work **really** well.	Things changed **kind of** quickly for him.
Kelvin **certainly** knows how to be innovative.	Kelvin can **hardly** wait to share his next invention.

1 **Listen.** Learn about teen inventors. Circle the word that best completes the sentences, based on what you hear. 097

1. Kelvin (*certainly*) / *sort of* learnt a lot in the United States, but he *hardly* / (*really*) wanted to return to his community in Sierra Leone.
2. Deepika Kurup realised that for some people, there was *absolutely* / (*barely*) enough clean water to live on, so she created an invention to change that.
3. Kenneth Shinozuka's smart socks have been *kind of* / (*very*) important for Alzheimer's patients and their carers.
4. People who suffer from Alzheimer's can (*hardly*) / *really* do anything without a carer present.
5. While caring for his family's cows, Richard Turere discovered that the lions that threatened the cows reacted (*quite*) / *slightly* negatively to bright, flashing lights.



Deepika Kurup

2 **Work in pairs.** Listen to the information again. Using the words provided, write two additional sentences about the teen inventors. 098

1. extremely _____
2. sort of _____

3 **Work in groups.** Cut out the cards and place them in two piles. Choose a card from each pile. Comment on the topic you get using the word on the other card.



Go to page 171.

Warm Up

- **Build background** Say *Are you ready to begin today's lesson? Some of you look like you're ready. Others don't.* Point to one student and say *(Lea) is ready to work.* Point to another and say *(Juan) looks tired.* Write students' names on the board, along with a description of how they seem to feel.
- Turn to the first student and ask *(Lea), is it true? Are you ready to work?* After the student responds, use an intensifier adverb to summarise. For example, if she answers *yes*, say *(Lea) is certainly ready to work!* If she answers *no* or *not really*, say *(Lea) is not quite ready to work.* Repeat this with the second student.
- Ask students to write how the students on either side of them seem. When they finish, ask students to say how their classmates feel. Turn to the student being described and ask him or her to confirm what was said. Summarise by saying *(Pedro) is kind of (tired) today.*

Present

- Ask students to open their books at page 122. Direct attention to the yellow grammar box. Play **Track 096** once and tell students to just listen. Then say each sentence without the intensifier. For example, say *Inventor Kelvin Doe is clever.* Play **Track 096** again, pausing after each sentence to point out the intensifier.
- **Explain** Say *We add adverbs such as* so, really *and* certainly *to make descriptions more detailed. These types of words make adjectives or actions stronger. If Kelvin certainly knows how to do something, there's no doubt that he knows.* Give additional examples of intensifiers by returning to the discussion in the Warm Up: *She is so tired today. He is really happy to be here.*
- Say *Words like* rather, kind of *and* hardly *are used in the same way. But instead of making the idea stronger, they make it weaker. For example, if we say that Kelvin is* rather *shy, we mean that he's shy, but he's not too shy.* Again, return to the examples from the Warm Up.

Practise 1

- 1 Say *We're going to listen to a passage about four teen inventors.* Tell students to copy the following table from the board:

Kelvin	Deepika	Kenneth	Richard
radio study in USA missed home			

- Play **Track 097** and pause it after the audio about Kelvin Doe. Ask *What did Kelvin invent?* (a radio) *Where did he study?* (in the USA) *How did he feel there?* (happy, but missed Sierra Leone) Write students' answers in the table and tell students to complete their own tables. Repeat this instruction for the second inventor. Then tell students to take notes on the last two inventors on their own.
- Tell students to scan the words in italics. Briefly review each word's meaning. Then tell students to use their notes to choose the correct adverb.

Apply 2 3

- 2 Say *Review the sentences from Activity 1. Then write two new pieces of information about the teens. I'm going to play the audio again. Check your notes with a partner and add any new information.* Play **Track 098**. Tell students to refer to the tables they made for Activity 1.
- 3 Direct students to page 171 and tell them to cut out the cards. Arrange students in groups of three. Tell them to scan the cards to make sure they understand them. Walk around the room as students work. When they finish, collect the cards with the adverbs on them and set them aside.

Extend

- Put students into groups. Give each group 12 pieces of paper and tell them to write an adjective or a verb on each one. Tell students to mix up their pieces of paper and put them face-down into a pile. Guide students to use positive adjectives.
- Tell each group member to select a piece of paper from the pile and make a sentence about him/herself using an adverb of intensity: *I'm rather tall. I can kind of play the guitar.*
- Hand out **Worksheet 4.7.5** to provide additional practice with adverbs that express intensity.

Consolidate

- Put the cards you collected from Activity 3 into a paper bag. Walk around the room and ask each student to pick a card. Then name a well-known person, like a teacher in the school or an explorer. Turn to one student and say *Make a sentence about Tan Le with the word on your card.* Repeat this as long as time allows.

BE THE EXPERT

Grammar in Depth

Adverbs that increase the intensity are sometimes called *intensifiers*. Intensifiers can modify adjectives, verbs or other adverbs. Adverbs that decrease the intensity are called *downtoners*.

Additional examples of intensifiers: *very, extremely, incredibly, absolutely, pretty*

Additional examples of downtoners: *slightly, sort of, barely, somewhat, just, only*

Pronunciation

Go to Student's Book page 147. Use Audio Tracks 128–129.

Variations in stress and intonation

In a normal sentence, groups of words, often referred to as *thought groups*, are spoken together. Each thought group has one word that's the most important. This is called the *focus word*. The focus word is the word that provides the most information. It is usually the last content word in a thought group. The focus word receives more stress than any other word.

However, there are situations where a word other than the last content word might receive more stress. For example, when a speaker wants to express a very strong belief about something, the focus word might move to the adverb before an adjective (***very*** *tall*). Here are more ways the focus shifts:

- Answers to *wh-* questions (A: ***Where's*** *my* ***pen***? B: *Your* ***pen*** *is on the* ***ta***ble.)
- To make a correction (A: *I* ***love*** *this* ***draw***ing. B: *Yes. It's a nice* ***paint***ing.)
- To add information (A: *He's an* ***art***ist … *a* ***graphic*** ***art***ist.)

Students should be aware of how stress and intonation can alter the meaning of sentences.

Formative Assessment

Can students

- use adverbs to express different levels of intensity?

Say *Describe yourself and what you can do using the words* really, sort of *and* definitely.

Workbook For additional practice, assign Workbook pages 74–75.

Online Workbook Grammar 2

WRITING

Objectives
Students will
- identify elements of an exemplification essay.
- use expressions that connect ideas.
- analyse a model exemplification essay.
- write an essay about a problem and how an everyday object could be used to fix it.

Academic Language *exemplification*

Content Vocabulary *librarian, nail polish, rust, screw, shiny, splinter, thread, tip, trick*

Resources Online Workbook/Workbook page 76; Process Writing Worksheets 1–5; Genre Writing Worksheet: Exemplification essay (Teacher's Resource CD-ROM/Website); CPT: Writing

WRITING

When you write an exemplification essay, you present a topic and then use examples to explain it. Well-chosen examples can support your writing by making it more accurate, believable and interesting. Use the following to introduce your examples:

for instance	**a good example is**	**to illustrate**
in particular	**specifically**	**such as**

1 **Read the model.** Work in pairs to identify the parts of the writing. How does the writer signal examples? Underline the phrases.

The other day, while I was at the library, I lost a button on my favourite shirt. I was so upset! It was covered in fabric to match the shirt, so I couldn't replace it. After a few moments of helping me search for the lost button, the librarian asked me if I had clear nail polish. I said I had some at home, so she gave me a tip – cover the buttons on a shirt with clear nail polish and they will stay on better. So I tried it on a different shirt, and it worked!

After learning this trick, I went online to see if there were any other uses for clear nail polish. It turns out there are many. A good example is that clear nail polish can help you thread a needle. Just put a little on the thread, and it will go straight through the eye of a needle.

Of course, clear nail polish is useful for things other than sewing! In particular, it can be used to keep things clean and shiny. For instance, if you paint the bottoms of metal containers with clear nail polish, they won't leave rust stains on your shelf. Put some on your belt buckle or costume jewellery, and it will stay shiny forever. Painting jewellery will also decrease the chance that the jewellery will harm your skin.

You can also use clear nail polish to keep things in place, such as screws. Paint the screw before putting it into the wall, and it will stay in better. Cover a broken piece of wood with clear nail polish, and you won't get splinters. Some people even use clear nail polish to relieve the itch of insect bites!

I don't think I'll use clear nail polish on my nails anymore. It has too many other practical uses!



2 **Work in pairs.** What are the problems that the writer can solve using clear nail polish? Make a list.

3 **Write.** Write an exemplification essay. Name a common problem and describe how an everyday object could be used to solve it.

Warm Up

- **Build background** Say *In this lesson, we're going to write an exemplification essay. In an exemplification essay, you give examples to explain a topic. Let's practise by giving topics and then using examples to explain them.*

- Write a list of topics that your students will find relevant on the board. Topics might include football, films, music, restaurants, shops, school subjects or video games. Say *Imagine that I don't know anything about the topic you choose. Think of examples that you could give to explain this topic. For example, let's say you choose video games and you want to tell me about your favourite video game. Explain the game, using examples.*

- Tell students to write two or three sentences about a topic. Then ask them to share their examples with the class. When appropriate, repeat what the student said, adding in one of the phrases being presented to signal an example. For example, say *(Paul) likes video games, specifically (name of video game).* Continue this until you have modelled using each of the new phrases.

- Say *Today we're going to read and write exemplification essays about topics that relate to creative problem-solving.*

Present

- Tell students to open their books at page 123. Direct them to the green box at the top of the page. Read the information aloud and tell students to follow along. Say *In the Warm Up activity, you told me about a topic. I repeated what you said using different words and phrases that signal examples. Now let's look at these phrases together.* Say each of the phrases and

ask students to repeat them. Then tell students to go back to the topic they wrote about in the Warm Up and rewrite one of their sentences using one of the new phrases.

Read the Model 1 2

- 1 Say *Let's read a model of an exemplification essay.* Read the instructions aloud. Then say *As you read, think about the topic.* Put students into pairs and tell one partner to read the essay aloud. After pairs finish reading, ask *What is the topic?* (uses for clear nail polish) Say *That's right. The writer is giving examples of ways that we can use clear nail polish to solve everyday problems.*
- Tell pairs to re-read the essay, this time with the other partner reading aloud. As they re-read, students should underline phrases that signal examples.
- 2 Say *In the essay, the writer uses clear nail polish as a solution to the problem of lost buttons. What other problems does she solve with clear nail polish? Make a list.* Allow time for pairs to create their lists. Then ask a student to come to the board and write the list. Check it with the class and add any other information that might be necessary. Then point to each problem and ask *Is this a problem you've ever had? Will you try this solution? Do you know any other solutions to this problem?* Listen to several students' responses.
- **Worksheet** If your students need a reminder of the elements of an exemplification essay, you may want to hand out the **Exemplification Genre Writing Worksheet** and review it together.

BE THE EXPERT

Writing Support

Usage Explain that when writing, students should choose a perspective and stick to it. For example, if students begin their essays using the first-person narrative (*I*), they should continue in that same perspective throughout and not change to second- or third-person narratives at any time. Students may be used to writing in the first-person because so many of their writing prompts ask them to write about themselves. When appropriate, encourage students to practise writing in other narrative voices.

Workbook For scaffolded writing support, assign Workbook page 76.

Online Workbook Writing



WRITING

When you write an exemplification essay, you present a topic and then use examples to explain it. Well-chosen examples can support your writing by making it more accurate, believable and interesting. Use the following to introduce your examples:

for instance	**a good example is**	**to illustrate**
in particular	**specifically**	**such as**

1 **Read the model.** Work in pairs to identify the parts of the writing. How does the writer signal examples? Underline the phrases.

The other day, while I was at the library, I lost a button on my favourite shirt. I was so upset! It was covered in fabric to match the shirt, so I couldn't replace it. After a few moments of helping me search for the lost button, the librarian asked me if I had clear nail polish. I said I had some at home, so she gave me a tip – cover the buttons on a shirt with clear nail polish and they will stay on better. So I tried it on a different shirt, and it worked!

After learning this trick, I went online to see if there were any other uses for clear nail polish. It turns out there are many. A good example is that clear nail polish can help you thread a needle. Just put a little on the thread, and it will go straight through the eye of a needle.

Of course, clear nail polish is useful for things other than sewing! In particular, it can be used to keep things clean and shiny. For instance, if you paint the bottoms of metal containers with clear nail polish, they won't leave rust stains on your shelf. Put some on your belt buckle or costume jewellery, and it will stay shiny forever. Painting jewellery will also decrease the chance that the jewellery will harm your skin.

You can also use clear nail polish to keep things in place, such as screws. Paint the screw before putting it into the wall, and it will stay in better. Cover a broken piece of wood with clear nail polish, and you won't get splinters. Some people even use clear nail polish to relieve the itch of insect bites!

I don't think I'll use clear nail polish on my nails anymore. It has too many other practical uses!

2 **Work in pairs.** What are the problems that the writer can solve using clear nail polish? Make a list.

3 **Write.** Write an exemplification essay. Name a common problem and describe how an everyday object could be used to solve it.

WRITING 123

Plan 3

- 3 Say *Now you're going to choose your own topic to write about. Before you decide on a problem, make sure that you can find a solution for it. Your solution should show creative use of an everyday object.* Write and explain the phrase *life hack*, which refers to using a product to help with a problem other than its intended use. Students can use this as a search term to get ideas online. Point out that students can also ask family members or friends for ideas on solving a problem with a common product. Say *Remember to first describe the problem. Then give examples of how an everyday object can be used to solve it.*

- **Worksheets** If your students need a reminder of any of the steps of process writing, hand out **Process Writing Worksheets 1–5** and review them together.

- **Workbook** Refer students to Workbook page 76 to help them organise and plan their writing.

Write

- After students have finished their pre-writing, tell them to work on their first drafts. If you don't have enough time for students to complete the first draft in class, assign it as homework.

Revise

- After students finish their first drafts, remind them to review their writing for clarity and organisation. Remind students to consider the following: *Is the problem clearly described? Are examples used to explain the solution? Are the ideas connected in a logical way? What needs more work?*

Edit and Proofread

- Remind students to consider elements of style, such as sentence variety, parallelism and word choice. Then remind them to proofread for mistakes in grammar, punctuation, capitalisation and spelling.

Publish

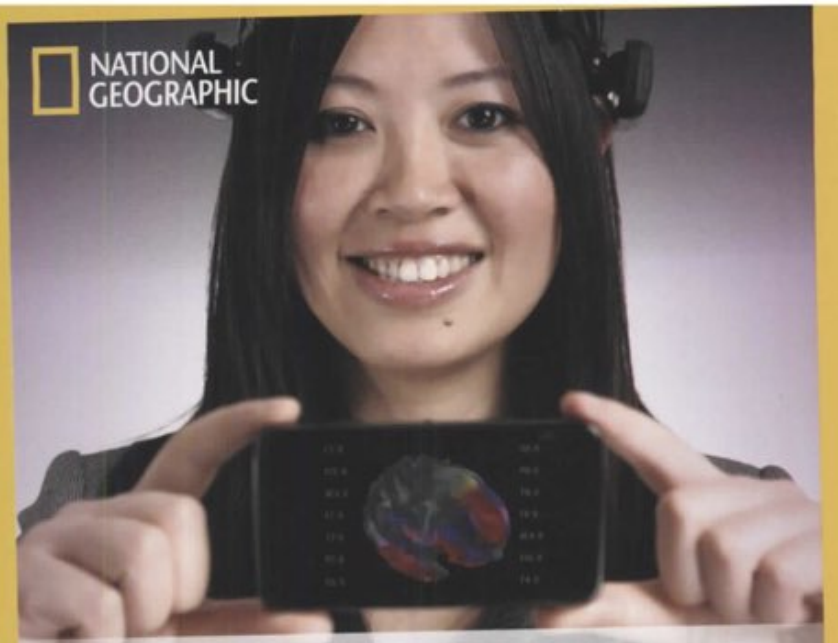
- Publishing includes handing in pieces of writing to the teacher, sharing work with classmates, adding pieces to a class book, displaying pieces on a classroom wall or in a hallway and posting on the Internet.

Writing Assessment

Use these guidelines to assess students' writing. You can add other aspects of their writing you'd like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

	1	2	3	4
Writing Ideas are clear and well organised, the problem is clearly described and examples are used to explain the solution.				
Grammar Student uses adverbs to express different levels of intensity.				
Vocabulary Student uses a variety of word choices, including words used in this unit.				



Don't Give Up

'Part of the process is figuring out what doesn't work as much as what does work.'

Tan Le

National Geographic Explorer, Innovator/Entrepreneur

1. **Watch scene 7.2.**
2. Tan likes to collaborate with others in her work. Do you think it's important to work with others when doing or making new things? How can being part of a team prevent you from quitting or giving up on something?
3. Think of a time when you gave up on something. Why did you give up? What would have happened if you hadn't?

MISSION

Objectives

Students will

- identify benefits of working together to solve problems.
- discuss instances in which they've given up and what may have happened if they hadn't.

Resources Video scene 7.2 (DVD/Website/CPT); Worksheet 4.7.6 (Teacher's Resource CD-ROM/Website); Online Workbook: Meet the Explorer; CPT: Video

BE THE EXPERT

Teaching Tip

Help students maintain communication in English throughout the lesson by giving them strategies. Point out that they can use phrases to buy time when they're thinking of a response. Gestures can also be helpful in clarifying meaning. You may want to teach and practise the strategy of *circumlocution* or saying something another way.

Online Workbook Meet the Explorer

Mission

- Read aloud the mission *Don't Give Up*. Say *When you give up, you quit. You walk away from whatever it is you've been doing.* Share a story about a time when you gave up on something. Explain what happened and why you did it. Then ask *Who else has given up on something? What did you give up on?* Ask one or two students to share a story about a time when they gave up on something and why they did it.
- Ask a student to read Tan Le's quote aloud. Say *We've learnt about several successful people who have experienced failure. Tan reminds us that failure is part of the process. What personality traits do you need to have to deal with failure?* (persistence, determination, ambition) List students' responses on the board.
- **Activity 1** Say *Now let's watch a video about Tan Le.* Play **Video scene 7.2**. As they watch, tell students to think about why Tan studies the brain.
- **Activity 2** Ask a student to read the questions aloud. Ask several other students to give examples of how pair or group work has helped them in your class. Then tell students to discuss experiences in which being part of a team or group has helped them to stick with a project.
- **Activity 3** Read the questions aloud. Go back to the story about giving up that you told earlier. Then talk about what might have happened if you hadn't given up. Allow time for students to share their own stories and theories about different outcomes. Point out that students may want to think about sports, performance or academics in their discussions and that they may wish to avoid more personal topics.
- **Worksheet** Hand out **Worksheet 4.7.6.** Explain that students will use the worksheet to further discuss Tan's innovations and ideas.

PROJECT

Objective
Students will
- choose and complete a project related to creative problem-solving.

Academic Language *model, profile, visual*

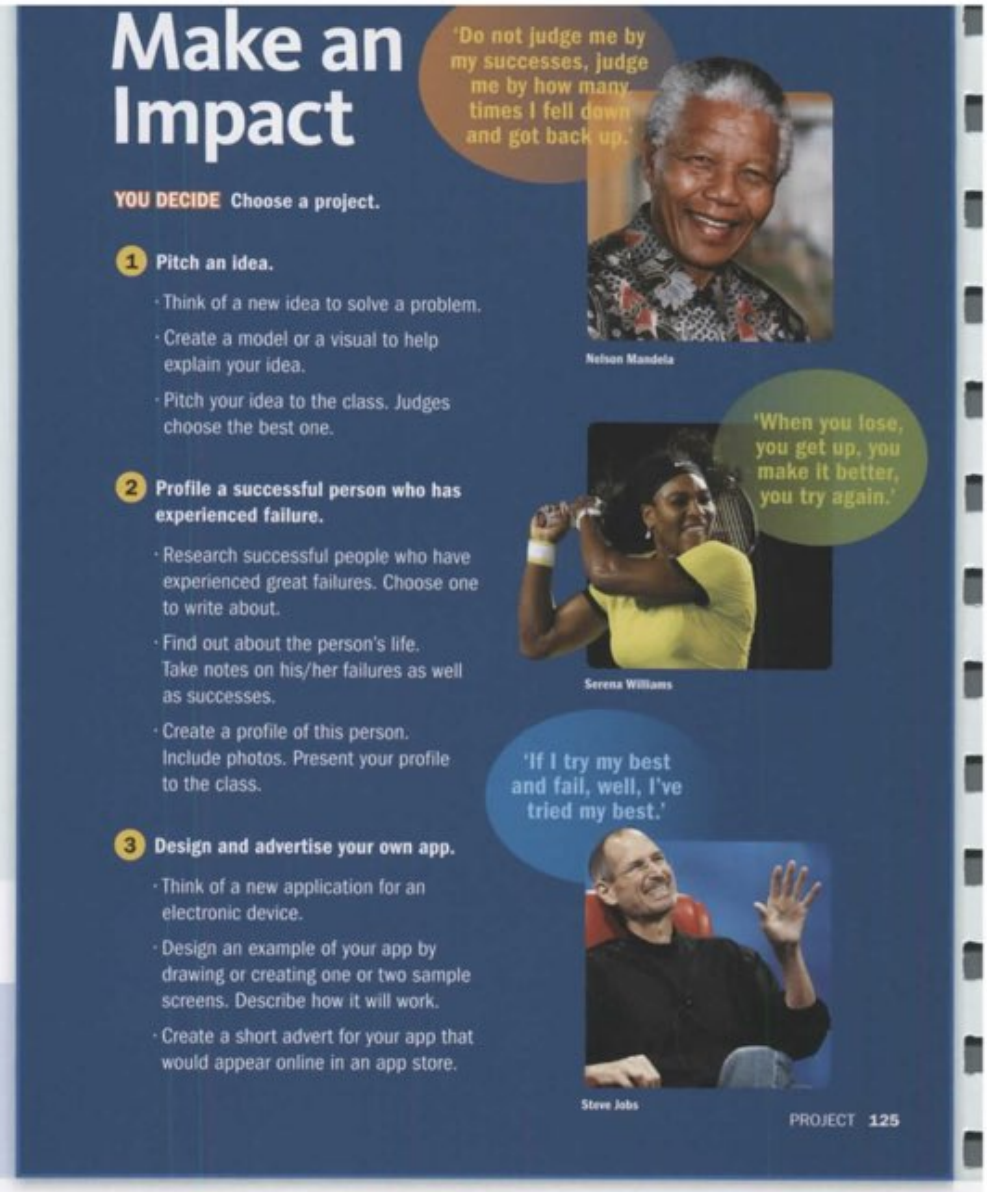
Content Vocabulary *advertise, app, judge, pitch*

Resources Assessment: Unit 7 Quiz; Workbook pages 77 and 96; Worksheet 4.7.7 (Teacher's Resource CD-ROM/Website); CPT: Make an Impact and Review Games

Materials audiovisual equipment (as needed)

Assessment Go to page 261.

Unit Review Assign Worksheet 4.7.7
Workbook Assign pages 77 and 96.
Online Workbook Now I can



Prepare

- YOU DECIDE Ask students to choose a project.
- **Activity 1** Explain what it means to *pitch* something. You may want to find video clips from television programmes on which people pitch ideas to show as models. Encourage students to be creative, funny and persuasive in their pitches.
- **Activity 2** Read aloud the quotations on the page and point out that students can research each of the people quoted as possible candidates for their profile. Point out that the person doesn't have to be a public figure; students could write about a family member or a community member who has overcome failure to find success.
- **Activity 3** Before they begin, tell students to visit an online app store and take note of how apps are portrayed there. Students should look at both the images and text and try to model their project after an authentic advertisement.

Share

- Schedule time for groups to present their final projects to the class. Bring in any necessary audiovisual equipment for students' presentations. Organise students who choose Project 1 into a group and assign the rest of the class to be judges. Give judges small pieces of paper to write their responses on and collect them in a box. Ask a volunteer to tally the results and announce the winner.
- **Modify** Students may choose to create videos of their pitches and post them to a class website for Project 1. If necessary, provide a list of successful people who have experienced failure to students who choose Project 2. Students can design their advertisement on paper or electronically for Project 3.

STUDENT'S BOOK AUDIO SCRIPT

Track 083 1 **Listen and read.** See Student's Book pages 112–113.

Track 084 2 **LEARN NEW WORDS** **3D printer** / 3D printers can create real objects using digital images. **application** / A single tool can have many different applications. **concept** / Makers work to turn their concepts into reality. **device** / Many people use devices such as smartphones. **do-it-yourself** / You can learn about do-it-yourself projects online. **experiment** / Makers have fun experimenting with new tools and materials. **failure** / Sometimes we learn more from failure than success. **hands-on** / A hands-on person enjoys being involved in different projects. **hardware** / Computer hardware continues to get lighter and faster. **inspire** / If you are inspired to create something, then go out and do it. **open-source** / Anyone can access open-source software. **play around with** / Do you like to play around with gadgets to get them to work? **resourceful** / A resourceful person will try to fix a broken object before replacing it. **solve** / Many people create their own gadgets to solve problems. **software** / You use different types of software each time you work on your computer.

Track 085 5 Do you have a great idea for an invention? Would you like to be a maker? Well, what are you waiting for? You don't need to be an adult – teens all over the world are becoming innovators. You also don't need to have a lot of money. It's possible to create with affordable devices, such as Raspberry Pi® . You can even find donated or recycled items to work with. Whatever you decide to do, make sure you're flexible in your plans. You'll probably experience failure at least once during your experiment. But if you're willing to try several different approaches, you'll eventually get the result you want.

Track 086 5 **LEARN NEW WORDS** **affordable** / It's often more affordable to fix an item than it is to replace it. **approach** / Many makers take a hands-on approach to problem solving. **flexible** / Makers must be flexible and willing to try different ways of doing things. **innovator** / An innovator creates something totally unique.

Track 087 **SPEAKING STRATEGY** See Student's Book page 115.

Track 088 1 **S1**: Some animal was in the vegetable garden again. **S2**: What makes you think that? **S1**: It ate the vegetables I was growing for my science project. **S2**: Are you sure they were eaten? I just think you haven't been giving them enough water. **S1**: Yes I'm sure. And I'm going to prove it! I'm making a camera trap. All I need is a cheap motion sensor, my old camera and an Arduino®. **S2**: So you think that this camera trap can photograph some animal eating your vegetables? **S1**: It should work. The instructions are online and don't look too complicated. **S2**: OK, but can you explain why all the other plants look so dry? Can that camera show how often you water the vegetables in your garden? **S1**: Maybe I should instead use the Arduino® to automatically water the vegetables each day instead!

Track 089 **GRAMMAR** See Student's Book page 116.

Tracks 090 and 091 1 2 Ladies and gentlemen, today we will be hearing from innovator Tan Le. When they first began designing their Emotiv Insight headset, Tan and her team wanted to learn more about a healthy brain. They also thought the headset would help improve human/machine interaction. Once the headset was successfully developed, the team decided to make the technology open-source. Researchers and developers can now access and adapt the technology for their own goals. As a result, the headset is being used for a wide variety of applications. It's especially useful for helping disabled people. People who have limited movement can control things with their mind. People who lack the ability to speak can use the headset for communication. A disabled musician can even create songs without ever picking up an instrument. The headset is used for safety as well. A car is being developed to sense if the driver is paying attention. The driver, wearing a headset, can control the car if he's focused. But as soon as he's distracted, the car knows to slow down. Even children can benefit from the Emotiv Insight headset. One company experimented by asking children to wear the device and then used 3D printing to create real objects, just from their thoughts! As you can see, the technology is extremely exciting. This afternoon, Tan will tell more about these developments. Ladies and gentlemen, here she is, Tan Le.

Track 092 4 Can you create a song without singing or playing an instrument? A project in the United Kingdom called *Mindtunes*® made it possible to do just that. During this project, DJ Fresh, a popular dance DJ, worked with three disabled musicians who couldn't move independently. The musicians wore EEG headsets that tracked their brainwaves. One of the participants describes the process as being a matter of feeling: 'You don't have to be able to read music,' he said. 'It's all about how you feel!' The three musicians' thoughts were recorded and interpreted. The headset then sent wireless signals to a computer, where DJ Fresh put the tune together. At the end of the experiment, their thoughts were transformed into some great dance music. Better yet, the song became a hit and all of the money it made is being donated to help the disabled in other ways. Now that's music to everyone's ears!

Track 093 4 **LEARN NEW WORDS** **disabled** / EEG headsets can help disabled people do things they couldn't do otherwise. **interpret** / Technology makes it possible for headsets to interpret our thoughts. **transform** / In the future, EEG headsets may transform our lives. **wireless** / Most electronic communication devices are wireless.

Track 094 2 **LEARN NEW WORDS** **amount to** / Einstein's teachers said that he wouldn't amount to much. **discourage** / Failure discourages some people from following their dreams. **persistent** / It's important for innovators to be persistent and keep trying until they get it right. **success** / Many people experience failure before they find success. **turn away** / Twelve publishers turned J.K. Rowling away.

Track 095 3 **WHILE YOU READ** See Student's Book pages 118–119.

Track 096 **GRAMMAR** See Student's Book page 122.

Tracks 097 and 098 1 2 You've learnt about inventor Kelvin Doe, who made his own radio transmitter at fourteen. He was later invited to study at the Massachusetts Institute of Technology in Boston. He learnt a lot during his visit to the United States, but Kelvin missed his community and his family in Sierra Leone.

Deepika Kurup visited India and became concerned about the supply of clean water available there. So, at the age of fourteen, she set out to work on a way to create clean water. She invented a device that can be placed into a bottle of water to purify it. The bottle is left in the sun with Deepika's invention and the sun's energy works with certain chemicals to kill the bacteria and other pollutants in the water.

At the age of fifteen, Kenneth Shinozuka saw the dangers that Alzheimer's patients face because they tended to wander off. Kenneth saw this happening with his grandfather, who suffered from the disease. To help people who care for Alzheimer's patients, Kenneth invented a sensor to be worn in socks that will help track location. An alert is sent to the carer's mobile phone when the patient begins to walk.

Thirteen-year-old Richard Turere was in charge of caring for his family's cattle. However, at night, lions would come to attack them. Richard soon realised that lions hate moving lights. So he invented simple, solar-powered lights and put them up to protect his cows from nighttime lion attacks. Since he installed his 'lion lights', none of his family's cows has been killed.

In This Unit

Theme This unit explores how humans make connections with art.

Content Objectives
Students will
- identify how art connects us across time, space and cultures.
- read about how and why artist Willard Wigan creates micro-sculptures.

Language Objectives
Students will
- talk about how art connects us across time, space and cultures.
- express interpretation and understanding.
- use reported speech to describe what someone said.
- use two- and three-word phrasal verbs.
- write a review of a piece of art.

Vocabulary
pages 128–129 *accomplishment, artwork, come up with, controversial, depict, draw in, mark, medium, perspective, power, preserve, primitive, reaction, technique, track down*
page 130 *decorative, dramatic, impressive, symbolic*
page 133 *admire, bold, critic, theme*
page 134 *detailed, exhibition, honour, miniature, needle*
Vocabulary Strategies Suffixes *-ic* and *-ive*; Collocations

Speaking Strategy Interpreting and expressing understanding

Grammar
Grammar 1 Use reported speech to describe what someone said
Grammar 2 Use two- and three-word phrasal verbs

Reading *Microscopic Marvels*
Reading Strategy Ask questions about a text

Video Scene 1: *A Photographer's Life;* Scene 2: Meet Stephen Alvarez

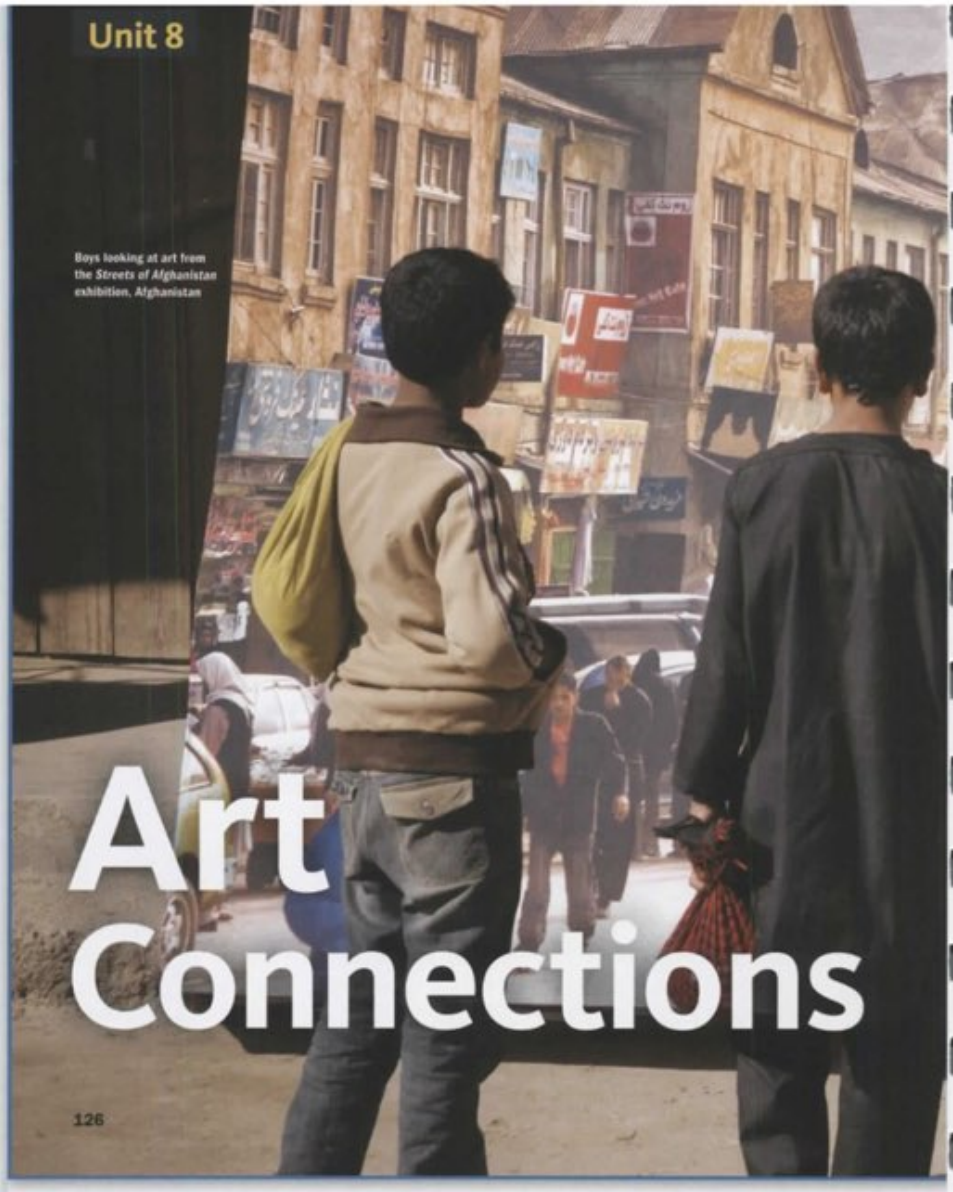
Writing Art review

National Geographic Mission Connect Through Art

Project
- Art auction
- Art book
- Cave art

Pronunciation Stress with two- and three-word phrasal verbs

Pacing Guides 4.8.1, 4.8.2, 4.8.3

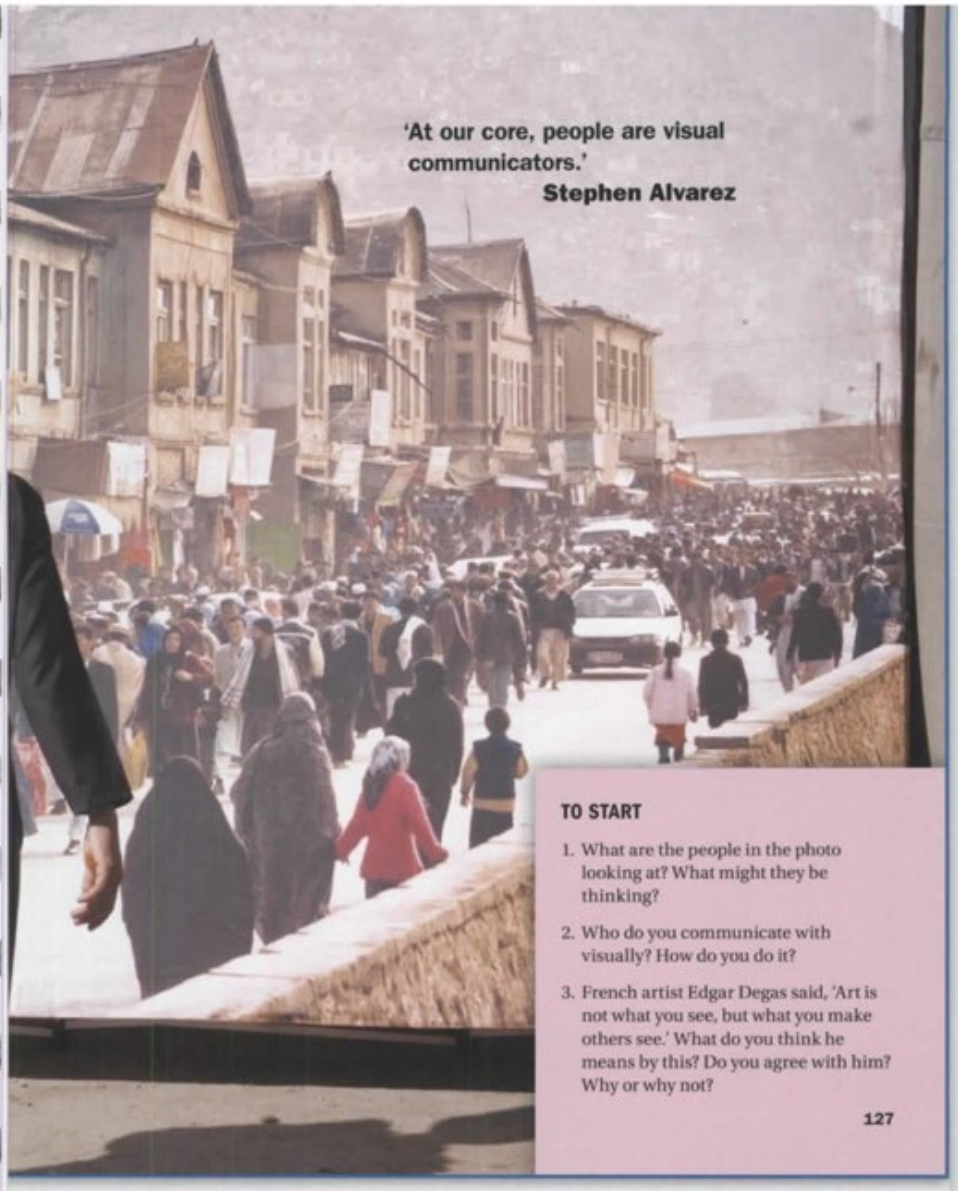


Introduce the Unit

- **Build background** Ask *How many of you have been to a museum?* Tell students to put their hands up and then ask students to talk about what types of things they find in a museum. (paintings, sculptures, artefacts, sketches) Then ask *Why do you think these things are kept in a museum?* (because they are valuable, to protect them, so others can see them) Write students' answers on the board.

- Say *The art and objects in a museum are there so that we can see them. When we look at art, we are able to learn about people, places and things of the past and the present. What piece of art has taught you something? What did it teach you?* Ask several students to respond.

- Tell students to open their books at pages 126–127. Ask questions to encourage discussion of the photo:
  Where are the boys? (outside)
  What are they looking at? (a photograph)
  What is the photograph of? (a city street)



- Ask a student to read aloud Stephen Alvarez's quote. Ask *Are you a visual communicator?* Encourage students who answer *yes* to give examples of how they communicate visually. Point out that there are many ways to do so, including sharing photos and emoticons. With that in mind, ask the question again and see how many more students identify as visual communicators.
- Ask a student to read Question 1 aloud and discuss the questions as a class.
- As students discuss Question 2 in pairs, tell them to think about how they communicate visually in different ways with different people.
- Read Question 3 aloud. Ask if students are familiar with Degas's work. Hold up a photo of a piece of Degas's work. Ask *What do you think he saw? What do you think he wanted you to see?* Discuss students' responses.

Extend

- Distribute **Worksheet 4.8.1**. Put students into pairs. Explain that partners will be writing about and discussing how people use art to make connections.

UNIT OPENER

Objectives
Students will
- describe and discuss a photo.
- discuss art and visual communication.

Content Vocabulary *communicator, core*

Resources Worksheet 4.8.1 (Teacher's Resource CD-ROM/Website); CPT: Unit Opener

Materials a photo of Edgar Degas's artwork

BE THE EXPERT

About the Photo

The boys in the photo are looking at a photograph from the *Streets of Afghanistan* exhibit. The exhibit, which was organised by National Geographic adventurer and humanitarian Shannon Galpin, began in 2011. Its goal is to portray Afghan culture in photographs, so that people can make connections and have a greater understanding of what real life is like in Afghanistan. Shannon hoped that the project would help people move beyond stereotypes they have of Afghanistan. She also wanted the Afghan people to see a reflection of their own lives and culture. Both Afghan and Western photographers contributed to the project. Their photos were enlarged to 3 by 2.5 m. (10 by 8 ft.) and displayed in public spaces in the United States and Afghanistan.

Teaching Tip

Always find ways to draw on students' personal experiences. For example, in this unit on art, encourage students to talk about favourite pieces of art, museums they've visited or art they've made. By bringing students' background experiences into the lesson, you're helping them to connect to new information and language in a meaningful way. Students like talking about themselves, so giving them the opportunity to discuss their experiences will make them more engaged in the lesson. As a result, there will be fewer distractions and interruptions in class.

VOCABULARY

Objectives
Students will
- identify and use vocabulary related to the origins of art.
- use new vocabulary to read about and discuss cave art.

Target Vocabulary *accomplishment, artwork, come up with, controversial, depict, draw in, mark, medium, perspective, power, preserve, primitive, reaction, technique, track down*

Content Vocabulary *argue, assumption, decade, finding, human nature*

Resources Tracks 099–100 (Audio CD/ Website/CPT); CPT: Vocabulary

Materials photos of artwork from at least three different historical periods



1 **When do you think people began making art?** Discuss. Then listen and read. 99

Art is part of the human experience. People have **come up with** many reasons to create **artwork** – some simple and others more complex. Art can be purely decorative, or it might be created to generate a certain **reaction**. Art also allows an artist to leave a permanent **mark** on time. A painting or sculpture allows the artist to **preserve** a moment that has long passed.

When did art begin? Well, that's a very **controversial** question. Researchers have been working for decades to **track down** the answer. Some have found triangular drawings on rocks in South Africa that are 75,000 years old. They believe that these triangles are art because they're symbolic of something, though there's no way to know for sure what they represent. Other experts don't think that this finding is that impressive. They argue that the images on the rocks don't **depict** any meaningful message. They suggest that we look to walls, specifically cave walls, to find the origins of art.

Sophisticated paintings from nearly 40,000 years ago have been found in caves in Europe and Asia. A red circle on a wall inside the El Castillo cave in Spain is the oldest known cave art at 40,800 years old. When cave art was first studied in Spain in 1880, researchers felt that it was the **accomplishment** of the earliest humans who migrated from Africa to Europe.

Cave paintings found at Chauvet-Pont-d'Arc in southern France

128 VOCABULARY

Warm Up

- **Build background** Say *The title of this unit is* Art Connections. *In the last lesson, we talked about looking at art. Why do people like to look at art?* Listen to students' answers. Then say *Art can bring us pleasure. It can also help us to connect with the artist, the subject of the artwork or the place or time shown in the work.*

- Display photos of artwork from three different periods of time, such as prehistoric art, Renaissance art and contemporary art. Use realistic, not abstract, artwork. Tell students to look at each piece and write their general impressions on a piece of paper. One by one, point to each piece of art and ask *Where do you think this was made? Why might it have been made? What can you learn about the time and place that this art comes from?* Provide information about each piece to answer the questions if students aren't able to do so.

- Say *As we look at this artwork, we're talking about different periods of time. When we look at art, we are able to connect to people who may have lived long before us in faraway places. Art is a way to capture a moment in time. Now, we're going to read to learn about how people connect to the earliest art.*

Present 1 2

- Ask *What do you think people were like 36,000 years ago?* Ask students to discuss this question with a partner. Listen to their responses, writing the most common answers on the board.

- Ask students to take out a piece of paper and a pencil and say *Now draw a picture of a horse.* Give students a few moments to do this. Walk around the room as they draw to comment on their work.



In the 1950s, a 39,900-year-old handprint was discovered on the wall of the Sulawesi cave in Indonesia. When researchers found these cave paintings, they noticed similarities to those found in Europe. These artists were using similar **techniques** and **mediums** to create their paintings. The fact that these two different groups created such similar art suggests that creating art to communicate ideas is simply part of human nature.

Photographer Stephen Alvarez feels that early cave paintings have the **power** to connect us to this prehistoric world. Stephen photographed the art in the caves at Chauvet-Pont-d'Arc, in southern France. The dramatic illustrations showed a level of detail that really **drew** him **in** and changed his **perspective** of early peoples. 'I had an assumption that people 40,000 years ago were **primitive**, that they thought very differently than me,' says Stephen. 'And the first time I saw real cave art, I was surprised by how visually complex it is. It made me realise that those people thought exactly like I do.'

2 LEARN NEW WORDS **Listen and repeat.** 100

3 **Work in pairs.** Do you believe that art is part of human nature? Why or why not? Discuss, using examples from your own experiences.

VOCABULARY 129

BE THE EXPERT

About the Photo

The photo was taken inside the Grotte Chauvet-Pont-d'Arc, a cave in the Ardèche region of southeastern France. Over 1,000 images have been found on the walls, many of them depicting animals such as horses, bears, mammoths and rhinoceros. The images are in excellent condition because the cave had been sealed for around 20,000 years as the result of a rock fall that closed it off. The paintings were discovered in 1994. They are renowned for their sophisticated appearance, which includes detailed shading, movement and anatomical accuracy.

- Ask students to open their books at pages 128–129. Say *Look at the photo. It shows cave art that is about 36,000 years old. These cave paintings are sophisticated. They were done very clearly and show a lot of detail.* Ask *How do the horses in this artwork compare to your own drawing?* Ask students to comment on the similarities and differences between their own horse and the horses in the photo. Then say *You might think that we are much more sophisticated than people who lived 36,000 years ago. But the person – or people – who created these paintings had artistic talent, maybe more than you.* Ask *How does that change what you think about what people were like at that time?* Discuss students' responses as a class.
- Ask a student to read aloud Activity 1 and discuss the answers. Say *Although this painting is very old, it's not the oldest art in the world.* Ask students to guess how old the oldest art is. Write their guesses on the board and confirm them after completing the reading.
- 1 Play **Track 099** and tell students to listen and read. Discuss the reading with students. Tell them to respond to the following:
  How can people connect with art?
  Why is the question 'When did art begin?' controversial?
  Where have cave paintings been discovered? What does that tell us about art?
  What changed Stephen Alvarez's perspective about prehistoric art?
- 2 LEARN NEW WORDS Play **Track 100**. Tell students to listen and repeat. Then tell students to work in pairs to practise pronouncing the words together. Guide students to use the new words to discuss the three pieces of artwork you showed them in the Warm Up activity.

VOCABULARY

Objectives

Students will

- practise using vocabulary related to art.
- use a vocabulary strategy to learn new words.

Target Vocabulary *decorative, dramatic, impressive, symbolic*

Vocabulary Strategy Suffixes *-ic* and *-ive*

Academic Language *compare, conclusion, summarise*

Resources Online Workbook/Workbook pages 78–79; Worksheet 4.8.2; Graphic organiser: T-chart *(optional)* (Teacher's Resource CD-ROM/ Website); Tracks 101–102 (Audio CD/ Website/CPT); CPT: Vocabulary

Materials a timer

4 Read and write the words from the list. Make any necessary changes.

accomplishment	artwork	come up with	draw in	medium
power	preserve	reaction	technique	track down

Photography is Stephen Alvarez's preferred ___medium___ for sharing with the rest of us what's hidden underground. As a National Geographic photographer, Stephen travels around the world, and into it, to ___track down___ the best, most powerful images of caves. He has to ___come up with___ effective ___techniques___, such as providing extra lighting, to deal with the challenges of taking photos in such dark areas.

Stephen was really impressed by the ___artwork___ on the walls in the Chauvet-Pont-d'Arc cave in France when he photographed it in 2014. He had an incredible ___reaction___ to photographing this cave art: a feeling of connection to the artists from 36,000 years ago. 'I wanted to photograph the paintings in a way that let the original artist's voice come through while also ___preserving___ the sense of what it is like to stand in front of that art.' Stephen was amazed by the ___power___ of the art to connect him with these early peoples.

5 LEARN NEW WORDS Listen to these words and match them to the definitions. Then listen and repeat. 101 102

decorative	dramatic	impressive	symbolic

___dramatic___ 1. strongly affecting people's emotions

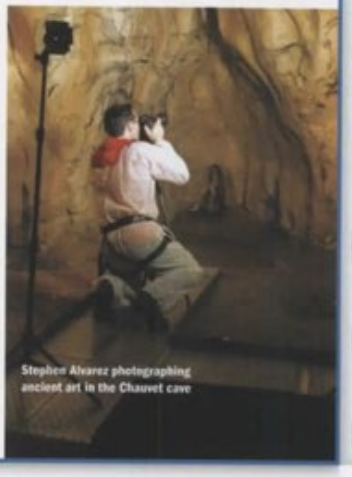
___symbolic___ 2. representing something else

___decorative___ 3. useful for making something more attractive

___impressive___ 4. creating a good reaction

6 YOU DECIDE Choose an activity.

1. **Work independently.** Go online to find out more about early paintings in one of the caves you read about. Write a paragraph summarising what you learnt. In your conclusion, say whether you were able to connect to the paintings. Explain why or why not.
2. **Work in pairs.** Create a simple drawing or painting that's symbolic of something in your life. Then share it with your partner. See if your partner can guess the meaning of your artwork. When you finish, swap roles.
3. **Work in groups.** Choose a modern mural in your community. Compare it with the cave art pictured on pages 128–129. Consider the medium, technique and meaning of each piece. Summarise the similarities and differences in a short presentation.



Stephen Alvarez photographing ancient art in the Chauvet cave

Practise 3 4 5

- 3 Read the questions aloud to students. If necessary, explain that *human nature* refers to ways of behaving or feeling that are common among most people, regardless of when or where they live.
- Ask students to turn to page 130. Point to the photo and say *This photo is of Stephen Alvarez. He's inside the Chauvet caves, photographing the cave art. How challenging do you think this might have been?*
- 4 Direct students' attention to Activity 4. Say *Let's read about Stephen and his experience photographing the cave art.* As a class, review the meaning of each of the words in the box. Then ask students to complete the activity independently.
- 5 **LEARN NEW WORDS** Read aloud the words in the box and note the similarities among the words. (Two have *-ic* suffixes; two have *-ive* suffixes.) Point out the base word in each term and ask students to identify its meaning. Play **Track 101** and tell students to write the word next to each definition. Next, play **Track 102** and tell students to listen and repeat.

- **Vocabulary strategy** Write the vocabulary words on the board as shown. Say the first two words and circle the suffix *–ic* in each one.

dramatic symbolic decorative impressive

- Say *We know that suffixes can be added to words to change their meaning or use. The suffix* -ic *means 'having the characteristics of'. When added to nouns, like* drama *or* symbol, *it changes them into adjectives.* Discuss the meanings of *dramatic* and *symbolic* with students. Provide additional examples.

- Now circle the suffix *-ive* in the other two words. Say *Like the suffix* -ic, *the suffix* -ive *is added to turn a word into an adjective. The suffix* -ive *means 'having a certain quality or tendency'.* Underline the root words and ask *What type of word are these root words?* (verbs) Say *We add the suffix* -ive *to a verb to make it into an adjective.* Again, review meaning of the words and provide additional examples.

Apply 6

- 6 YOU DECIDE Ask students to choose a project. Read aloud to the class each of the three activity options. Then ask students to form pairs or groups if necessary. Guide students who choose the first option to appropriate websites. Tell students who select the second option to choose their partner before beginning. Make sure students sit by themselves to create their drawings. For the third option, you may want to provide photos of murals in your community for students to choose from.

Extend

- Provide further practice with *-ic* and *-ive*. On the board, in any order, write: (suffix *-ic*) *poet, icon, allergy, alphabet, ocean, hero;* (suffix *-ive*) *act, attract, compete, communicate, describe, collaborate.*

- Put students into pairs and give each pair a copy of the T-chart graphic organiser. Tell students to label one column suffix *-ic* and the other column suffix *-ive*. Then tell students to rewrite the words you provided with the appropriate suffix, making any necessary spelling changes.

- When pairs have finished, check their work. Award a point for each correct word. The pair with the most points wins.

- If time allows, assign **Worksheet 4.8.2.** Explain that students will use vocabulary words to discuss art connections.

Consolidate

- Write the following time periods on the board: 75,000 years ago, 40,000 years ago and 36,000 years ago. Set a timer for one minute. With books closed, tell students to write as much as they can about prehistoric art in each period. When the timer goes off, ask students to share what they wrote. Fill in the information in a timeline. Tell students to open their books at pages 128–129 and check their answers.

BE THE EXPERT

Vocabulary Strategy

Suffixes *-ic* and *-ive* Remind students that knowing the meanings of suffixes will help them to better understand the meanings of new words with those suffixes. The suffix *-ic* is commonly attached to nouns of Greek or Latin origin to turn them into adjectives (photo/photographic, metal/metallic). The suffix *-ic* means *relating to* or *having the characteristics of.*

The suffix *-ive* is generally added to verbs in order to form adjectives (act/active, create/creative). The suffix *-ive* comes from the Latin suffix *-ivus*. The suffix means 'having a certain quality or tendency'.

Formative Assessment

Can students

- identify and use vocabulary related to the origins of art?

  Say *Use the words* accomplishment, technique, medium *and* power *to describe cave art.*

- use new vocabulary to read about and discuss cave art?

  Ask *How can we connect to cave art from thousands of years ago?*

Workbook For additional practice, assign Workbook pages 78–79.

Online Workbook Vocabulary

SPEAKING STRATEGY

Objective
Students will
- interpret and express understanding.

Speaking Strategy Interpreting and expressing understanding

Academic Language *interpretation*

Content Vocabulary *headdress, offering*

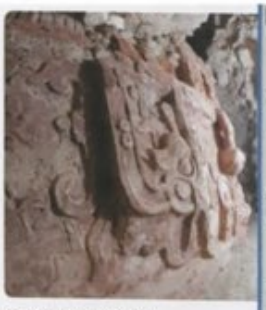
Resources Online Workbook; Worksheet 4.8.3; Graphic Organiser: Sunshine organiser (Teacher's Resource CD-ROM/Website); Tracks 103–104 (Audio CD/Website/CPT); CPT: Speaking Strategy

Materials several pieces of artwork or a photo of artwork, glue, old magazines

SPEAKING STRATEGY 103

Interpreting and expressing understanding

Why did early peoples paint these images on the cave's wall?
Possibly because they didn't have a writing system.
It seems to me that it was an expression of religious beliefs.
It appears that there wasn't much else to do for fun.
Maybe they did it because they wanted to leave a mark.
Apparently, people wanted to record their experiences.
This seems to symbolise their interest in the natural world.



Mayan carvings at Holmul, Guatemala, discovered by National Geographic Explorer Francisco Estrada-Belli and his team

1 **Listen.** How do speakers interpret the artwork? Write the words and phrases you hear. 104

2 **Read and complete the dialogue.** Possible answers:

Carlos: Look at this carved mural, Sylvia. It was discovered in Guatemala. It was preserved in the buried Mayan city of Holmul.
Sylvia: Wow! That's enormous! I wonder why it was so big!
Carlos: Possibly because the Mayans would usually build new structures on top of older ones, making them bigger.
Sylvia: There are so many different people in the carving. Do you know what they represent?
Carlos: Apparently, they were Mayan rulers, who were considered gods.
Sylvia: What's that on their heads? Are those birds?
Carlos: Yes. Wearing a headdress made of birds was common in Mayan civilization. They seem to symbolise wealth or power.
Sylvia: Maybe it was because of all the brightly coloured birds in Guatemala. Their feathers certainly made decorative accessories. And look at this man. Is he holding food?
Carlos: Probably. It appears that food was a common offering to the gods.

It seems to me that the artist had a political message.

3 **Work in groups.** Choose three photos or works of art to share. Put your group's photos into a single pile. Take turns selecting an image from the pile. Then throw the cube. Use the word or phrase on the cube to make a sentence about the image.



Go to page 173.

4 **Work in pairs.** Choose a photo or a piece of artwork in this book and discuss your interpretations of it.

Warm Up

- **Build background** Say *We've already discussed how looking at art helps us to connect with others. But in order to connect with art, we need to interpret it. We need to understand its meaning.*
- Display a piece of artwork or a photo of a piece of artwork. Tell students the name of the piece and its artist. Say *Let's try to interpret, or understand the meaning of, this piece of artwork.* Divide students into groups to discuss the artwork you display. Give each student a copy of the Sunshine graphic organiser.
- Draw the Sunshine graphic organiser on the board and complete it as you listen to students' interpretations. Write the name of the artwork in the middle and add obvious information, such as the artist's name and the date, in the Who? and When? sections. Then complete the organiser as a class.
- When the organiser is complete, summarise what you wrote using the new phrases. For example, say *It appears that it was made in the 1940s, possibly during World War II. It seems to me that the artist was trying to depict the destruction of war.*

Present 1

- Tell students to open their books at page 131 and scan the text in the yellow box. Read the question aloud once. Then play **Track 103**. Say *All of these phrases can be used when you're trying to interpret a work of art, literature or any other concept. We use these phrases to signal understanding.* Ask students to read each of the phrases aloud.
- Hold up a different piece of artwork to the one you showed in the Warm Up and ask *(When) do you think this was created?* Tell students to use the new expressions to provide and explain their answers. Ask several questions about the piece.

- 1 Say *Now listen as two people have a conversation about art found in the caves of Lascaux, France.* Play **Track 104** and tell students to write the new phrases they hear.

Practise 2

- 2 Direct students' attention to the image at the top of the page. Say *Let's read the conversation that two friends are having about these carvings.* Tell students to scan the conversation and clarify any unknown words or concepts. Then allow time for students to complete the activity independently.

Apply 3 4

- 3 For this activity, tell each student to bring in three photos of artwork as a homework assignment. Alternatively, you can let students use an electronic device to find three photos online.
- **Model** Direct students to page 173 and tell them to cut out and assemble the game cube. Then model throwing the cube. Hold up a piece of artwork and talk about it, using the phrase on the cube. For example, say *This seems to symbolise (happiness).*
- 4 Explain that students can look ahead for artwork taught in this unit or they could choose a photo from earlier in the book.

Extend

- Arrange students into groups of four. Give each group a piece of paper, an old magazine, scissors and glue. Say *You're going to cut out words and images to create a mysterious message. Your message should have a hidden meaning that only your group knows.* Model using words and phrases to create a puzzling message, such as a photo of the sun to express the word *son*.
- Allow time for groups to come up with their message and stick it to a piece of paper. Then collect the messages and redistribute them among the groups. Allow time for groups to work out the meaning of the message you gave them. Then ask each group to share their interpretations.
- If time allows, assign **Worksheet 4.8.3**. Explain that students will use the worksheet to interpret and express understanding.

Consolidate

- Create a chaotic scene in your classroom. For example, knock a chair over and put papers, pencils and other supplies all over the floor. Or, look for a photo that shows a similar scene. Say *The phrases we practised today were used to interpret artwork, but we can use these words in different contexts. Look at the scene. Tell your partner what you think happened to result in this scene. Use the new expressions.* Ask pairs to share their interpretations.

BE THE EXPERT

Strategy in Depth

Students can apply the expressions presented in this strategy when talking about artwork, literature, film or even in everyday conversation. Remind students that they can also use familiar expressions such as *I think ...*, *I believe ...* or *It could be that ...* to express interpretation or understanding. Point out that the phrases provided in this lesson are more sophisticated and appropriate for academic or formal conversations.

About the Photo

The photo shows the Mayan carvings at the city of Holmul, in the northeastern region of Petén, Guatemala. The carvings are part of a large frieze that measures 8 m. by 2 m. (26 ft. by 7 ft.). The frieze, which was discovered in 2013, in the foundation of a pyramid, is extremely well preserved. Over 95 per cent of the frieze, which dates back to 590 CE, was found intact, despite the fact that the areas around it were all looted. The images show human figures in a mythological setting.

Formative Assessment

Can students

- interpret and express understanding?

Guide students to look closely at the photo on page 131 and interpret or express understanding of one aspect of the Mayan carving.

Online Workbook Speaking Strategy

GRAMMAR 1

Objectives
Students will
- use reported speech to describe what others say.
- identify and use new words to understand an art lesson.

Grammar Reported speech: Describing what others say

Target Vocabulary *admire, bold, critic, theme*

Academic Vocabulary *argue, claim, quote, reported speech, state*

Content Vocabulary *compliment, make sense*

Resources Online Workbook/Workbook pages 80–81; Tracks 105–108 (Audio CD/Website/CPT); CPT: Grammar 1

Materials copies of a short interview with a celebrity or athlete

GRAMMAR 105

Reported speech: Describing what others say

'This **can't** be an original painting of Georgia O'Keeffe.'	He **argued** that it **couldn't be** an original painting of Georgia O'Keeffe.
'Frida Kahlo **had been injured** in a bus accident. After that, she **began** painting.'	The teacher **explained** that Frida Kahlo **had been injured** in a bus accident and **had begun** painting after that.
'We **will begin** studying sculpture later this year.'	She **pointed out** that they **would begin** studying sculpture later that year.
'Art **should reflect** the world we live in.'	He **suggested** that art **should reflect** the world we live in.
'What exhibition **is** at the art museum this month?'	She **asked** what exhibition **was** at the art museum that month.
'**Go** and see Kobra's murals.'	They **told us to go** and see Kobra's murals. They **claimed** we **wouldn't** be disappointed.
'You **won't** be disappointed!'	

1 **Read the quotes about art.** Then complete the sentences using reported speech.



1. Pablo Picasso stated that the world didn't make sense, so he wanted to know why he should paint pictures that made sense.
2. Van Gogh explained that he wanted to touch people with his art.
3. Frida Kahlo reflected that she painted flowers so they would not die.
4. Georgia O'Keeffe claimed she hated flowers. She explained that she painted them because they were cheaper than models and they didn't move.
5. Arthur Schopenhauer advised us to treat a work of art like a prince.

Warm Up

- **Activate prior knowledge** Tell students to open their books at pages 126–127. Say *Look at the two boys studying the photograph. Consider what they might be thinking or saying as they look at it. Work in pairs to write a short dialogue.*

- Walk around the room as students write a conversation between the two boys. Point out that students should limit the conversation to two or three lines of dialogue. When you find a strong response, copy the conversation on the board. For example, a conversation might be something like the following:

> A: I think it's incredible how many people are out in the street.
>
> B: It is crowded. My family shops on a street just like this.

- Ask the pair who wrote this conversation to read it aloud. Then point to the first of the two students. Direct your question to the



People all over the world **admire** Eduardo Kobra's murals. **Critics** compliment his **bold** use of colour and attention to detail. Kobra's murals have different **themes**, but many honour the memory of historical figures.

2 **LEARN NEW WORDS** **Listen to an art teacher's lesson on Brazilian street artist Eduardo Kobra.** Then listen and repeat. 106 107

3 **Work in pairs.** Listen again to the lesson. Write what the teacher said. Use reported speech and the words provided. 108

1. say / critics / people walking by
She said that Kobra's first critics were people walking by.
2. point out / street art / accept
Possible answers:
She pointed out that street art hadn't always been accepted.
3. explain / stand out / bold
She explained that Kobra's work stood out for its bold colours.
4. remind / recognise / subject
She reminded us that we should recognise the subjects of his murals.
5. tell / look at / famous
She told us to look at some of his most famous murals.
6. ask / choose / favourite
She asked if we could choose a favourite.

4 **Work in groups.** Think of a mural in your school or community. Compare it to Eduardo Kobra's mural. Talk about the theme, size, technique, level of detail and use of colour. Then take turns explaining to the class what you discussed.

We pointed out that Kobra used colours that were much bolder than those on the mural in the cafeteria.

entire class and ask *What did (he) say?* Ask a student to respond. Then say *That's right. He said that he thought it was incredible how many people were out in the street.* Write the reported answer on the board and underline the verbs in different tenses. Repeat this with the other lines of dialogue. Then say *In this lesson, we're going to learn how to report what others say.*

Present

- Tell students to open their books at pages 132–133. Say *You may already know how to use reported speech. We use words like* ask, tell *and* say *to report what someone says.* Turn to a student and say *Can I borrow your pencil?* Then turn to the class and say *I asked her if I could borrow a pencil.*

- Direct attention to the yellow box at the top of page 132. Say *As we listen to these sentences, notice how the verbs change in reported speech.* Play **Track 105** and tell students to follow along. Then play the track again. This time, pause the recording after each pair of sentences and ask students to identify the verb tense in the original sentence and the tense in reported speech.

BE THE EXPERT

Grammar in Depth

Reported speech is used to say what another person has said. The tense used in the original sentence may shift when the time of the original statement is different from the time of the reporting.

For example, the future at the time of speaking might be the past at the time of reported speech.

'He will paint the mural.'

She said he would paint the mural.

If the time of reporting is just slightly after the original statement (*i.e.*, the same day), it could keep the same tense:

She said he will paint the mural.

When modals are used in the original sentence, the tense doesn't shift:

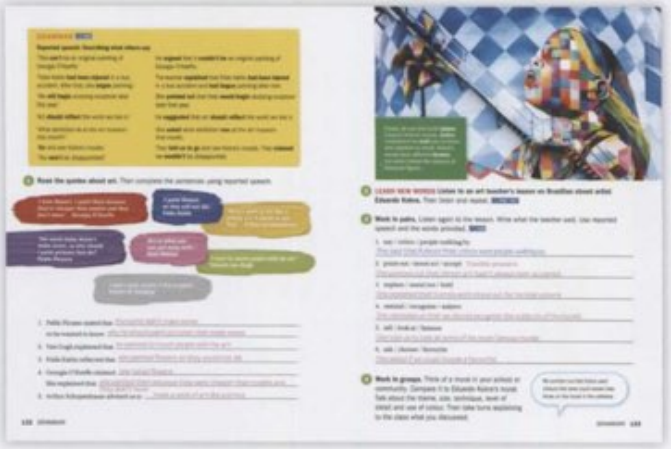
'I should really learn to paint.'

He said he should really learn to paint.

Students may be familiar with reported speech using verbs such as *say, tell* and *ask.* Point out the variety of verbs used in the lesson (*suggest, claim, argue, point out,* etc.) and encourage students to use these words as they practise.

About the Photo

The photo shows a mural of a girl blowing a windmill, created by Brazilian street artist Eduardo Kobra. It was painted on a water tower in the city of Cubatão, Brazil. Kobra's murals appear in countries around the world, though he does a lot of work in his native country, where street art is legal and even encouraged in many places.



- **Explain** Say *When using reported speech, the tense of the verb often changes. If you say something and I report what you said, my reporting comes after you make the statement. So the original statement is often in the past in reported speech.* Write the following example on the board:

> I am going to the museum.
>
> Naomi said she was going to the museum.

- Read aloud the sentences. Say *Notice how the present tense of be is used in the first sentence. Because this sentence has already been said, I change it to the past when reporting speech.* Point out that the tense shift is not a rule, but a guideline. Give the example *She says she's going to the museum* to show that if the reporting verb is in the present, the verb in the original sentence is also in the present.

- Further explain that past tense verbs in the original sentence appear in the past perfect in reported speech. Re-read the second sentence pair to demonstrate this. In the third pair of sentences, tell students to notice how *will* changes to *would* in reported speech. Explain that no change is necessary when there's a modal verb in the original sentence. Re-read the fourth sentence pair to review.

- Lastly, point out the verb *said* in the example you wrote on the board. Circle the verb and say *We know verbs like* say, tell *and* ask *are used for reporting. What other verbs are used in these sentences?* (claim, suggest, argue, explain, point out) Review the meanings of these words with students and encourage their use throughout the lesson.

Practise 1

- 1 Say *Now we'll read some quotes about art.* Tell students to scan the quotes and the artists and identify artists that they are familiar with. Then ask individual students to read each of the quotes aloud. Briefly discuss each quote's meaning.

- **Model** Say *Let's look at the first item together. Here, we're talking about Picasso.* Ask if students are familiar with Picasso and his work. Then ask a student to re-read the quote by Picasso. Say *Picasso says that the world doesn't make sense. Look at the sentence starter for item 1. It's in the past tense. So let's also change the quote to the past tense. What is the past tense form?* (didn't make sense) Model completing the first part of item 1 on the board. Tell students to complete the rest of item 1. Review the answer.

- Allow time for students to complete the remaining items independently. Then ask students to report in groups. When they finish, review their answers.

- Extend the activity by telling students to write their own sentences to report on the quotes by Warhol and de Kooning.

Apply 2 3 4

- 2 **LEARN NEW WORDS** Say *We've learnt about early art. Now we're going to learn about a modern artist.* Display the photo on page 133. Ask *How is this art different from the early art that you saw on pages 128 and 129?* Students may respond that it's more modern, more colourful or more out in the open.

- Say *Let's listen to an art teacher's lesson about the artist who created this artwork, Brazilian street artist Eduardo Kobra.* Play **Track 106** once. Then play the track again. Ask these discussion questions:
  How did people first react to Kobra's work? (They didn't like it. They told him to get a job.)
  What are his murals known for? (bold colours, geometric shapes, historical figures)
  What does he use to create his murals? (paint, spray paint)

- Play **Track 107**. Tell students to listen and repeat the words and sentences. Review each word's meaning and ask students to explain how the words relate to Kobra's story and his work. If possible, project additional murals by Kobra so that students can become more familiar with his work. Alternatively,

encourage students to research his murals online.

- 3 Read aloud the instructions. Put students into pairs. Tell them to work together to brainstorm what they remember from the lesson. Play **Track 108** and tell students to take notes as they listen. Allow time for students to write their sentences. Then play **Track 108** again and tell students to check their work.

- 4 **Model** Display a model of a mural and discuss its theme and size. Talk about how the artist may have completed the work. Use words from the Speaking Strategy lesson as you model. Then compare it to the Kobra mural on page 133.

- Put students into groups. If they cannot think of a mural to compare with Kobra's, offer them suggestions of murals in your area that they might be familiar with. Walk around as students work to listen to their conversations. Then discuss their comparisons as a class. Remind students to use reported speech in their discussions.

Extend

- Put students into groups of three. Say *You probably have used reported speech at some time in your life when you were talking to a parent or teacher. You may have used reported speech to explain a situation or to try to get out of trouble. Now, you're going to role-play a situation in which two teens are talking to an adult about a conflict. They are in trouble but want to get out of it. The teens use reported speech to explain what happened.*

- Allow time for students to work together to develop a short play. Point out that in the short play there should be a conflict that the two teens are trying to explain to a parent, teacher or other adult. Students should aim to blame one another or someone else for the conflict by using reported speech. Model sentences such as *You never explained that we needed to hand our project in* or *She claimed that she didn't know anything about it.* Students should use reported speech at least three times. Encourage students to be humorous and creative in their short plays.

- Allow time for students to perform the role play for the class. Tell the class to vote on the funniest short play.

Consolidate

- Give students a copy of a short interview with a celebrity or an athlete. Make sure that the reading's content and level are appropriate. The interview should not be more than ten or fifteen lines long.

- Allow time for students to read the interview. Then tell them to write two sentences using reported speech to summarise what was asked or said during the interview. Ask students to share their summaries in pairs and then invite several students to share with the class. To add variety, give each pair a different interview to read and summarise for the class.

BE THE EXPERT

Teaching Tip

When assessing students' knowledge of grammar, go beyond simply using the quizzes and tests that accompany the course. Arrange time to assess students informally on grammar. Schedule a conversation that should last between three and five minutes. Talk about any relevant topic that would require use of the targeted grammar point outside of the lesson's context. When assessing students in this way, go beyond just checking for the correct grammar form. Take note to see if the student has mastered the meaning and appropriate use of the grammatical structure. You may want to use this type of assessment as part of the student's overall marks. Or you may wish to just use the information to learn about what is difficult for students. These informal assessments could serve as a guide for additional teaching support on the topic.

Related Words

blow, windmill

Formative Assessment

Can students

- use reported speech to describe what someone said?

  Read aloud two of the quotes on page 132 and ask students to re-state them using reported speech.

- identify and use new words to understand an art lesson?

  Ask students to describe the characteristics of Eduardo Kobra's murals.

Workbook For additional practice, assign Workbook pages 80–81.

Online Workbook Grammar 1

READING

Objectives
Students will
- read about how and why artist Willard Wigan creates micro-sculptures.
- identify and use new words from the reading.
- ask questions to better understand the reading.

Reading Strategy Ask questions about a text

Vocabulary Strategy Collocations

Target Vocabulary *detailed, exhibition, honour, miniature, needle*

Content Vocabulary *admit, celebrity, contribution, dyslexia, fibre, fly, inhale, nylon, tag, saying*

Resources Online Workbook/Workbook pages 82–83; Worksheet 4.8.4 (Teacher's Resource CD-ROM/ Website); Tracks 109–110 (Audio CD/ Website/CPT); CPT: Reading

Materials small plastic doll or figurine (smaller than your hand), an image of one of Willard Wigan's sculptures *(optional)*, pieces of card



Microscopic Marvels

Artist Willard Wigan knows how to make a big impression in small places.

Willard Wigan's sculptures fit inside the eye of a needle.

1 **BEFORE YOU READ Discuss in pairs.** Look at the photo on the right. What do you think this man is doing?

2 **LEARN NEW WORDS Find these words in the reading.** What do you think they mean? Look at the words that appear right before or after each of the words. Then listen and repeat. 109

detailed	**exhibition**	**honour**
miniature	**needle**	

3 **WHILE YOU READ Pause after each paragraph.** Write a question you have about Willard Wigan and his work. 110

4 **AFTER YOU READ Work in pairs to respond to the following.**

1. Describe the average size of one of Willard's sculptures.
2. How can you see his work?
3. Who buys it?
4. What materials does he use?
5. What were his first micro-sculptures?

134 READING

Warm Up

- **Build background** Find a very small doll or figurine to show the class. The item should be a recognisable shape, such as a person or a small toy car. Find the smallest item you can. Hold it up in front of students and say *Look at this item. Describe it. What is it used for?* Ask students to write one or two sentences to describe the item and then listen to their responses.

- Next say *Now think about the process of making this item.* Ask *Who do you think made it?* (factory worker, artist, designer) *How was it made?* (with machinery, carved, sculpted) *Why was it made so small? How would it be used differently if it were larger?* Ask students to write their ideas on a piece of paper. Then discuss their answers to these questions as a whole class.

- Say *This miniature (soldier) may be small, but we're going to read about sculpted figures that are much, much smaller.*

'Just because you can't see something, that doesn't mean it's not there.' This old saying is certainly meaningful for British sculptor Willard Wigan. The sculptures he creates are very small, so small that most of them fit on the head of a pin or in the eye of a needle. On average, his works are half the size of the full stop at the end of this sentence.

People from around the world admire Willard's work (through a microscope, of course!). Celebrities and royalty alike own his sculptures. He's even been honoured by the Queen of England for his contributions to the arts. But at every one of his exhibitions, the question is always the same: *How does he do it?*

The answer is very, *very* carefully. So carefully, in fact, that he actually slows his breathing down and works in between breaths. He learnt the hard way that he must do this after he once inhaled one of his sculptures.

Before he begins, Willard collects the materials he needs. Many of his sculptures are made with nylon tags from clothing and fibres found in fabrics and carpets around his house. If fibres are too thick, Willard might instead use pieces of a spider web to add detail. To sculpt, Willard works under a microscope using miniature tools that he creates himself. Amazingly, he rarely uses glue. Instead, he carves spaces into the needle or pin, and forms his work so that it fits into those spaces. To paint his sculptures, Willard uses the hair from a dead fly as a paintbrush.

Creating these detailed works is a very long and difficult process, one that Willard admits isn't always the most enjoyable. 'It's a nightmare when I start but a dream when I finish,' he says. A single sculpture can take up to three months to complete.

People have asked Willard why he has chosen to do something so difficult and time-consuming. His interests in micro-sculpting began when he was five. He started creating houses and playgrounds for ants. Willard was not a strong student. He struggled with dyslexia, and his teachers were quick to call him a failure. This made him feel small, so focusing on little things helped him to feel big. The smaller his work got, the bigger he felt. 'I want to show the world that the little things can be the biggest things,' he says.



5 **Work in pairs.** Share the questions that you wrote in Activity 3. Then discuss their answers. Go online to find any answers that weren't in the reading.

6 **Discuss in groups.**

1. Share your reaction to Willard's work and the process he uses to create it.
2. Go online to find additional photos of his sculptures. Share photos with your group members. Describe which ones you like the best.
3. Willard started creating miniature sculptures because his teachers made him feel small, and he wanted to feel big. What makes you feel small? What can you do to change how you feel in this situation?

Before You Read 1 2

- Tell students to open their books at pages 134–135. Hold up your book and point to the photo of the needles. Ask *What are these? What do you use them for?* (sewing) Say *That's right. We use needles to sew. Has anyone ever sewn something with a needle?* Ask students to put their hands up. Then say *When you sew, you have to put thread through this part of the needle.* Point to where the sculptures are. Say *This is called the eye of the needle. Is it difficult or easy to put thread through this part of the needle?* (difficult) *Why is it difficult?* (because the eye is so small) Then say *The eyes of these needles have sculptures inside of them! We're going read about how they are made.*

- 1 Hold up your book and point to the photo of Willard Wigan on page 135. Say *Look at the photo. What equipment can you see?* (a computer, a microscope) Then say *Think about the equipment and the sculptures on page 134 as you discuss the question with a partner.*

BE THE EXPERT

Strategy in Depth

Ask questions about a text When students ask questions about a text, they are developing their own ideas for what they want to learn from the reading. This strategy can be practised when you're sharing an intriguing text with students. Give them an overview of the topic and ask them to develop some initial questions. Then tell them to pause periodically during the reading to ask further questions based on what they've read. Model doing this with simple phrases such as *I wonder why this happens* or *When did it say she was born?*

Vocabulary Strategy

Collocations A collocation is a group of words that is commonly found together, such as *learn the hard way* or *the little things*. Teaching collocations, or teaching students to notice collocations, can help them gain greater understanding of vocabulary in different contexts. For example, students may understand the words *draw* and *blind*, but when they know the phrase *draw the blinds*, they see that collocation refers to a different concept entirely: covering the windows. Learners can use collocations to make meaningful connections between vocabulary and contexts. Collocations are also useful in helping students to communicate effectively by making their speech sound more natural.

Answer Key

Comprehension 4

1. small enough to fit on the head of a pin or in the eye of a needle
2. through a microscope
3. celebrities and royalty
4. clothing tags, fibres, spider webs, paint (using the hair from dead flies as paintbrushes)
5. houses and playgrounds for ants



- 2 **LEARN NEW WORDS** Say *We're going to look at some new words that will help us learn about these sculptures and the artist who makes them.* One at a time, say the words aloud. Tell students to guess at the meaning of each word. Then play **Track 109.** Tell students to listen and repeat each word and sentence.

- **Vocabulary strategy** Write the word *needle* on the board. Say *We've learnt that a needle is a tool used for sewing. In the reading, we see the phrase* eye of the needle. *In this phrase, you see the word eye. Notice that eye isn't referring to a part of the body. It is used with the phrase* of the needle *to mean 'hole'.* Explain that collocations are useful for helping to focus on a new idea, not the individual meaning of each word in the phrase.

While You Read 3

- 3 Say *Now we're going to read to learn about these sculptures and how they're made.* Play **Track 110** and pause after the first paragraph. Say *Willard's work is so unusual. You probably have some questions about it. In this paragraph, we learnt that Willard's work is very, very small. The last sentence says it's half the size of a full stop. That's small! I wonder how people are even able to see his sculptures if they're that small!* Write the following question on the board:

> How can people see such small sculptures?

- Continue playing **Track 110** and pause after the second paragraph. Say *Well, we see the answer to my first question. People see the sculptures through a microscope.* Write the answer next to the question on the board. Then continue by saying *Let's think of another question that we have about Willard's work.* Ask students to think of questions. As needed, point out that they can simply ask the question found at the end of the paragraph. Remind them to listen for the answer.

- Repeat this instruction, pausing after each paragraph for students to write a question about the text. When you finish, check to see if students have any unanswered questions.

After You Read 4 5 6

- 4 Put students into pairs. Tell them to discuss their answers to the questions. Encourage them to use any notes they took while answering their questions. Then review their responses as a class.

- 5 Tell students to choose a different partner than the one from Activity 4. Tell partners to show one another their list of questions and discuss the answers. Walk around the room and provide any additional answers if you're able. Then allow students to research any unanswered questions online. You may choose to assign this for homework.

- 6 Divide the class into groups to discuss the topics. There are also a number of online videos in which Willard discusses his work. Consider showing one of these videos to students before they begin their discussions.

- Remind students to be sensitive and respectful to one another as they discuss Question 3. Point out that they should avoid topics that are overly personal. If students feel uncomfortable talking about this topic in groups, allow them instead to write their responses as a diary entry.

Extend

- Tell students to work together to create a quiz game about Willard and his work. Put students into groups of three and tell them to write ten questions about Willard. The questions can be based on the text or they can be based on Willard's life and work using information that students find online about the artist. Remind students to include answers and sources for questions they researched online.
- Provide model questions such as the following:

> What was the sculpture Willard inhaled?
>
> a. Alice from *Alice in Wonderland*
>
> b. a spider
>
> c. a motorcycle

- After groups prepare their questions, collect them. Divide the class into two teams to play the game. Choose a question to ask a student from Team A. If the question is based on the reading, it's worth one point. If it was something that students researched online, it's worth two points. If the student gets the answer wrong, a student from Team B has the opportunity to answer.
- Continue playing this way until each student has had a chance to answer a question or as time allows. When you finish, add up the points for each team. The team with the most points wins.
- **Worksheet** If time allows, assign **Worksheet 4.8.4** in class. Remind students to review the new words presented on page 134.

Consolidate

- Give each student a piece of card. Choose one of Willard's works to display. It can be one from the book or a different work that you've printed out or projected. Tell students to study the image.
- Say *Imagine you just got a job at the local museum. The museum acquired one of Willard's sculptures. Write the text that the museum would display next to his sculpture to explain it. Make sure you talk about the artist's background, his mediums and his technique.*
- Give students several moments to write their descriptions. Then collect students' cards. Read several strong answers aloud for the class.

BE THE EXPERT

About the Photo

The photo on page 134 shows two needles, each with an eye that contains one of Willard Wigan's sculptures. The top sculpture is called *Golden Harley.* It is a microscopic replica of a Harley-Davidson® motorcycle. Willard later challenged himself to make a similar sculpture of a motorcycle, only smaller. This one, called *Orange County Chopper,* was made out of small hairs from his own beard. He carved into the hair for 16 hours a day, for five weeks. The result was a micro-sculpture of the bike that was smaller than a human blood cell.

The bottom sculpture, entitled *Cinderella,* shows the fairy-tale character with her stepmother and stepsisters.

In the photo on page 135, we see Willard showing his work at a museum exhibition called *Kleine Welten* (Small Worlds) that took place in 2014 in Hamburg, Germany.

Our World in Context

Willard Wigan's sculptures have become very expensive, starting at more than £32,000 a piece. The Prince of Wales, boxer Mike Tyson and musician Elton John are among the celebrities who have purchased Willard's work. Former British tennis player David Lloyd purchased a set of 72 works by Willard, which he had insured at £11.2 million.

Formative Assessment

Can students

- read about how and why artist Willard Wigan creates micro-sculptures?

  Ask *Why did Willard Wigan begin making micro-sculptures?*
- identify and use new words from the reading?

  Ask students to use *detailed, miniature* and *needle* to describe Willard's work.
- ask questions to better understand the reading?

  Say *Imagine you looked at one of Willard's sculptures for the first time. What are two questions that you'd have about it?*

Workbook For additional practice, assign Workbook pages 82–83.

Online Workbook Reading

VIDEO

Objectives
Students will
- identify and describe details of Joel Sartore's life and work.
- apply the video's message to their own lives.

Academic Language *compare, comparison, contrast, diagram*

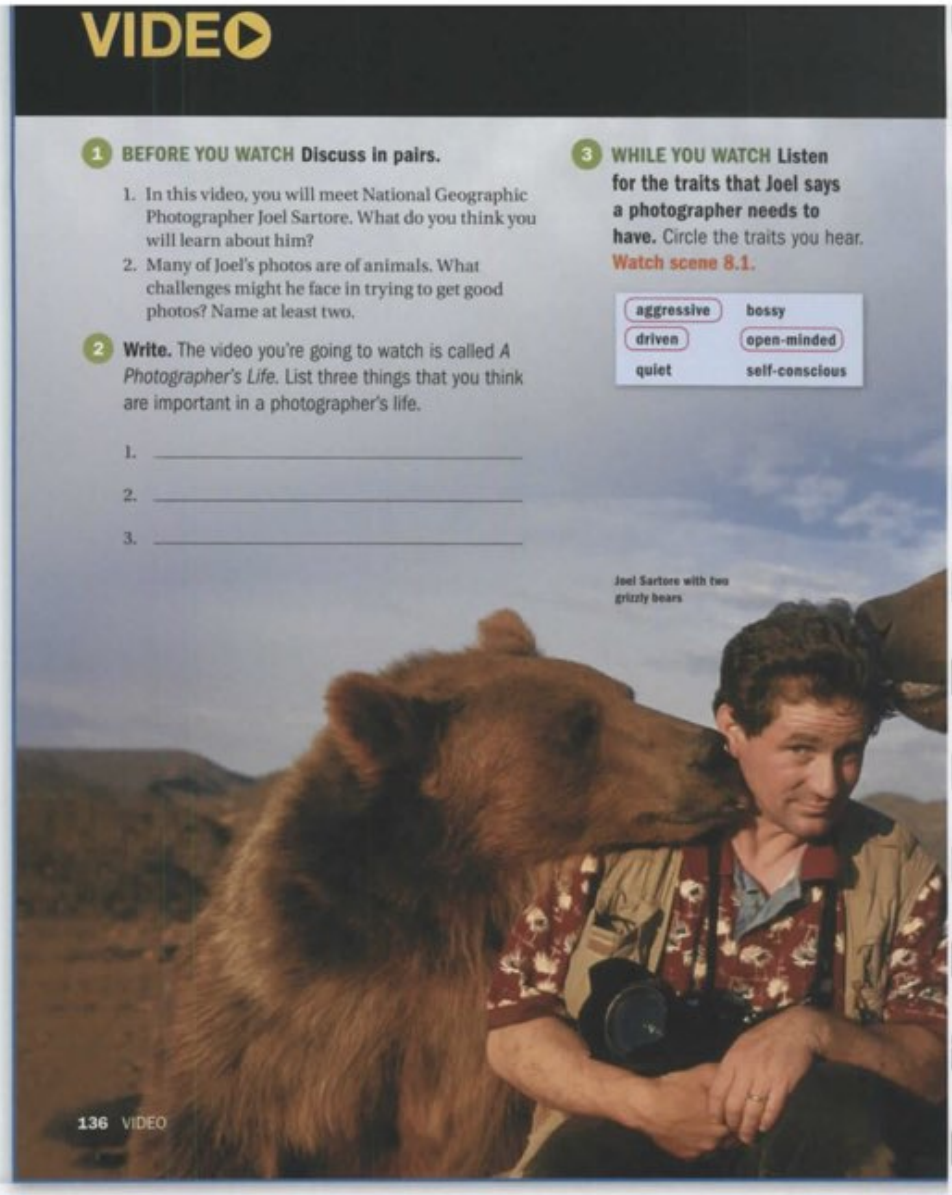
Content Vocabulary *alienate, appreciative, background, car dealership, elevate, evaporate, eye contact, Guinea pig, iconic, outlast, to put off, shoot (a photo), stranger*

Resources Graphic Organiser: Venn diagram (Teacher's Resource CD-ROM/Website); Video scene 8.1 (DVD/Website/CPT); Online Workbook; CPT: Video

Answer Key

Comprehension 4

1. He means that photographers need to act fast in order to get a good picture.
2. trying new foods
3. to get people to let photographers take their photos
4. 35,000 taken; three or four used
5. a project in which Joel is photographing thousands of species on black or white backgrounds / 20 years
6. He's raising awareness of the many species of animals for conservation.



Before You Watch 1 2

- Tell students to turn to pages 136–137. Say *Now we're going to talk about what it's like being a professional photographer. Who likes to take photos in this class?* Ask students to put their hands up. Then ask *Why do you like taking photos?* Listen to several responses. Say *Earlier in the unit, we talked about some of Stephen Alvarez's challenges in photographing caves. What do you think are some challenges of getting a good photo?* Ask several students to respond and write their ideas on the board.

- 1 Read the instructions aloud and tell students to discuss the answers in pairs. For Question 2, tell students to compare the challenges of photographing animals with the general challenges you wrote on the board of getting a good photo. Ask *What is more challenging about photographing an animal?* Listen to several students' responses.

- 2 Read the instructions aloud. Tell students to write their lists and compare them with a partner's. Encourage students to write more than three ideas if possible.

While You Watch 3

- 3 Before you play the video, direct students' attention to the word box. Read each word aloud and review its meaning. For each word, tell students to put their hand up if they would describe themselves in this way. Students may think of the word *aggressive* as meaning 'willing to fight'. Point out that in this context, *aggressive* is not so negative. It means that someone is willing to be persistent and perhaps even a little forceful, in order to get something done.

- Play **Video scene 8.1** and tell students to circle the words they hear. Then check their responses as a class.

4 AFTER YOU WATCH **Work in pairs to answer the questions.**

1. What does Joel mean when he says, 'you can't sleep on it' (in reference to taking photos)?
2. What does Joel seem to dislike about travelling for work?
3. Why do photographers need to quickly establish friendships in new places?
4. How many photos does Joel shoot each year? How many does he think are worth keeping?
5. What is *The Photo Ark*? How long has Joel been working on it?
6. Why is Joel creating *The Photo Ark*?

5 **Work in pairs.** Joel wants people to 'look these species in the eye so that they care about these animals more'. Why would eye contact make us care more? How do you think eye contact affects relationships between people? Does eye contact have the same effect between animals and people? Explain.

6 **Work in groups.** In the video, Joel says, 'Most species are going extinct because we don't pay any attention to them.' Give two or three examples of this. Discuss ways to raise awareness of these animals.



7 YOU DECIDE **Choose an activity.**

1. **Work independently.** Photograph an animal on a plain black or white surface. Show the photo to the class. Say how and where you took it. Was it easy or difficult? Describe any challenges you faced.
2. **Work in pairs.** Research Joel's project *The Photo Ark*. Choose your favourite five photos. Present them to the class, describing each of the animals.
3. **Work in groups.** Compare and contrast the photography of Joel Sartore and Stephen Alvarez (or another famous photographer). How is their work different? What is the same? Create a Venn diagram to show your comparison.

BE THE EXPERT

About the Photo

This photo shows American photographer Joel Sartore in California, USA, with two grizzly bears nuzzling up to him. The grizzly bear is a species of brown bear that is native to North America. A typical grizzly measures 1.5 to 2.5 m. (5 to 8 ft.) tall. Grizzlies are fast animals that can run over 45 kph. (30 mph.). Their diet consists of nuts, berries, fruit and other plant matter, as well as fish, such as Alaskan salmon. Although they look playful in this photo, grizzlies can be dangerous to humans.

Formative Assessment

Can students

- identify and describe details of Joel Sartore's life and work?

Ask *What is the Photo Ark? Why is Joel working on it? What does he need to do to get a good photo?*

Online Workbook Video

After You Watch 4 5 6 7

- **4** Tell students to review the questions and discuss the answers that they know in pairs. If necessary, play **Video scene 8.1** again. Then tell students to check their work and answer any questions that they weren't able to answer the first time.
- **5** Read the instructions aloud and play the end of **Video scene 8.1** again, beginning at 2:30. Tell students to take note of the eye contact the animals make with the camera and use their observations in the discussion. Tell students to consider eye contact in their culture. Ask *How is eye contact perceived in our culture? When is it acceptable? When is it not?*
- **6** If necessary, work as a class to brainstorm a list of threatened or endangered animals before students begin. Encourage students to think of at least two ways to raise awareness about the animals' status.
- **7 YOU DECIDE** Ask students to choose a project. Suggest that students try to photograph a household pet or an insect, such as an ant or a fly. Point out that students should not try to get a wild animal for this activity. Students may wish to visit a pet store or animal shelter and ask a worker to handle an animal to help them with their photograph.
- Guide students who choose the second option to Joel Sartore's website to view the photos from this collection: http://www.joelsartore.com/galleries/the-photo-ark/. Students can print and share the photos or they can prepare a slideshow of their favourites.
- Tell students who choose the last option to research the work of Stephen Alvarez or another photographer they know of and choose several photos to compare with Joel's. Tell them to consider location, topic and style in their comparisons. Give students a copy of the Venn diagram organiser and tell them to complete it in small groups.

GRAMMAR 2

Objectives
Students will
- use two- and three-word phrasal verbs.
- identify words that can and cannot be separated.

Grammar Two- and three-word phrasal verbs

Academic Language *category, inseparable, separable*

Content Vocabulary *suffer, woodblock*

Pronunciation Stress with two- and three-word phrasal verbs

Resources Online Workbook/Workbook pages 84–85; Worksheet 4.8.5, Pronunciation Answer Key (Teacher's Resource CD-ROM/Website); Tracks 111, 130–132 (Audio CD/ Website/CPT); CPT: Grammar 2 and Pronunciation

GRAMMAR 111

Two- and three-word verbs

Separable	Inseparable
Artists want to **draw in** their viewers. Artists want to **draw** their viewers **in**. Artists want to **draw** us **in**.	A true artist **comes up with** unique ways to express herself.
I'm working to **track down** the origins of art. I'm working to **track** the origins of art **down**. I'm working to **track** them **down**.	Critics **rave about** the modern art exhibition at the museum. They say it's really impressive!
Can we **work out** the meaning of this painting? Can we **work** the meaning **out**? Can we **work** it **out**?	I'm **looking forward to** seeing the works on display.

Self-Portrait with Bandaged Ear by Vincent van Gogh, 1889

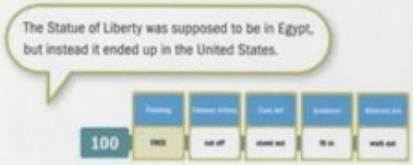


1 Read and complete the sentences. Make any necessary changes. For help, see pages 149–152.

come up with	cut off	get away with	look down on
look forward to	take down	track down	work out

1. Vincent van Gogh suffered mental illness, which led him to ___cut___ his ear ___off___.
2. Andy Warhol says that 'Art is what you can ___get away with___.'
3. Author Robert Edsel is working to ___track down___ works of art that were lost during World War II.
4. One family ___took___ a Diego Rivera painting ___down___ and destroyed it because they didn't like the political message.
5. Wealthy Japanese art buyers ___looked down on___ the technique of woodblock printing used by Katsushika Hokusai. They didn't like making art so accessible.

2 Work in groups. Research information for each of the categories on the game board. Then choose a topic and a verb. Make sentences with the information you researched.



Go to page 175.

Warm Up

- **Pre-teach** Write on the board: *I'm thinking about visiting my grandparents next weekend. I think of them often. During the visit, we can think ahead to our holiday this summer.*
- Ask *What word can we see in each of the sentences?* (think) *We know what the word* think *means: to have an idea in your mind. But look again at these sentences.* Underline the verbs *think about, think of* and *think ahead* in the sentences. Say *Notice how the use of these words with* think *changes the meaning.*
- Say *There are many verbs in English that are made up of two and three words. These are called phrasal verbs. When these words work together as a single verb, their meanings can change.*

Present

- Direct attention to the yellow grammar box on page 138. Say *There are two groups of phrasal verbs: separable and inseparable. Separable verbs might have the object or object pronoun in between each word. Inseparable verbs have to stay together.* Play **Track 111.**
- **Explain** Direct students' attention to the separable verbs. Say *Look at the sentences again. The separable verbs are two-word verbs. Notice the bottom sentence in each group – it has an object pronoun.* Write each object pronoun used on the board: *us, them* and *it.* Say *When a separable verb is used with an object pronoun, it must be separated.*
- Direct attention to the inseparable verbs. Say *Notice that two of these examples have three-word phrasal verbs. A three-word phrasal verb cannot be separated.*

Practise 1

- Tell students to open their books at page 149. Say *On this page, there is a list of inseparable two-word phrasal*

verbs, which continues to the next page. Tell students to review the phrasal verb lists on pages 149–152.

- 1 Tell students to turn to page 138. Read the instructions aloud and say *Scan the word box. Find the words on the lists in the back of your book. Put a tick next to all the phrasal verbs that are separable. Then use this information to complete the activity.*

Apply 2

- 2 Direct students to page 175 and tell them to cut out the game board. Say *We're going to talk about each of these topics:* paintings, famous artists, cave art, sculpture *and* abstract art. *Put together some facts for each topic. Go online to learn more about the topic or talk to a partner about it.* You may want to ask students to do this research as a homework assignment.

- **Explain** Divide students into groups to play the game. Tell them to turn back to page 138 and read the instructions aloud. Say *You have each found information about these topics. Now you're going to take turns making sentences about them. Choose a box on the board. If you correctly make a sentence using the verb and the topic, you earn the number of points in the left-hand column.* Once all spaces have been crossed off, the game is over.

Extend

- Write on the board: *find out, fit in, get along with, get away with, give up, look forward to, rely on* and *work out.* Say *Create a survey of your classmates. Write five questions, each containing one of these verbs. Your questions can be about any topic. For example,* What are you most looking forward to this year? *or* What have you got away with at home recently?

- Allow time for students to survey three to five classmates. Tell them to note the responses. Then ask students to share the funniest and most interesting responses.

- **Worksheet** Distribute **Worksheet 4.8.5** to provide additional practice with two- and three-word phrasal verbs.

Consolidate

- Put the following words in a table on the board: *away, on, about, out, of* and *down*.

- Say *Now, work in pairs to write as many two- and three-word verbs as you can that contain each of these words.* Give examples. Allow time for pairs to complete the table. Encourage at least two responses in each column. Say *After you write as many phrasal verbs as you can think of, put a tick next to the separable verbs. For help, go to pages 149 to 152.*

- If time allows, review the table as a whole class and write students' responses in your own table. Tell students to keep their tables and use them for future reference.

BE THE EXPERT

Grammar in Depth

Multiple-word verbs can be prepositional phrasal verbs (verb + preposition; e.g., *look at, think of*) or phrasal verbs (verb + adverbial particle; e.g., *take off, throw away*). Some two-word phrasal verbs are separable. For example: *Look the word up in the dictionary. Look up the word.* Others are inseparable: *Think of John when you're there.* Three-word phrasal verbs consist of a verb + adverbial particle + preposition (e.g., *get away with, run out of*). All three-word phrasal verbs are inseparable.

Pronunciation

Go to Student's Book page 147. Use Audio Tracks 130–132.

Stress with two- and three-word phrasal verbs Generally, the stress in two- and three-word phrasal verbs differs from the stress of regular verbs + prepositions.

1. Two-word phrasal verb: The second word (called a *particle*) receives stress, while a normal preposition after a verb does not usually receive stress. Prepositions are usually reduced.

2. Three-word verbs (or a phrasal verb + a preposition): The first two words are usually stressed. The last word is not stressed because it is a preposition.

3. Objects: Generally, object *nouns* are stressed because they offer new information. Object *pronouns*, however, are not usually stressed because they refer to information already introduced.

Formative Assessment

Can students

- use two- and three-word phrasal verbs?

  Ask students to use the verbs *work out, draw in* and *come up with* to describe the van Gogh painting on page 138.

- identify words that can and cannot be separated?

  Write the phrasal verbs *look down on, look for* and *look up* on the board. Ask students to identify the separable verb from the group.

Workbook For additional practice, assign Workbook pages 84–85.

Online Workbook Grammar 2

WRITING

Objectives
Students will
- identify elements of an art review.
- identify which questions to answer in an art review.
- analyse a model art review.
- write an art review.

Academic Language *context, fact, opinion, review*

Content Vocabulary *block, exaggerated, feature, ink, multiple, press, sacred, series*

Resources Online Workbook/Workbook page 86; Process Writing Worksheets 1–5; Genre Writing Worksheet: Review (Teacher's Resource CD-ROM/ Website); CPT: Writing

WRITING

In an art review, you need to give both facts and opinions. Research the artwork and its artist to help you understand the work and the context it was created in. In your review, answer the following questions:

- **What do you see?**
- **Why did the artist create the work?**
- **How did the artist create the work?**
- **What is your reaction to the work?**

1 **Read the model.** Underline the answers to each of the questions above.

The Great Wave off Kanagawa is one of the best-known pieces of art in the world. Japanese artist Katsushika Hokusai created the image sometime around 1830. It was part of a series of 36 images to feature Mount Fuji, Japan's highest mountain. In this image, Mount Fuji is far off in the background and looks very small from the viewer's perspective. Fishing boats and their crews are being thrown around by the enormous waves, and viewers can only hope that they get out of the sea unharmed.

The series of images that includes *The Great Wave off Kanagawa* was created on wood blocks. To create the work, Hokusai first drew the image with ink and then carved it into the wood. Next, coloured ink was put on the blocks. Sheets of paper were then pressed onto each of the blocks to print the design. Because Hokusai used this technique to create multiple copies, many people could own this print.

Hokusai had been painting for years before creating this famous print. In fact, he was in his seventies when it came out. He probably chose to feature Mount Fuji because it is considered a sacred place in Japan. The print method was good for selling art, which may have been another reason why Hokusai created the series.

The Great Wave off Kanagawa is an excellent example of Japanese art. It draws viewers in with its exaggerated movement and interesting perspective. Hokusai uses both Japanese and Western techniques, which give the print a unique style. This also makes the art accessible so that, even today, people everywhere can connect with 19th century Japan.



2 **Work in pairs.** What is the author's opinion of the artwork? Do you agree? Why or why not?

3 **Write.** Write a review of a piece of artwork that you've seen in this unit or elsewhere. Make sure you research the work. Include facts and opinions in your review.

Warm Up

- **Revisit** Say *In this lesson, we're going to write an art review. Remember that we wrote a restaurant review in Unit 3. Let's revisit what we learnt when we wrote the restaurant review. Open your books at page 55.*
- Read the green box on page 55 aloud. Say *When we write a review, we give facts and opinions. In our restaurant reviews, we gave facts like when the restaurant was open and what food it served. We also gave opinions to say what we liked about it.*
- If you have kept students' restaurant reviews in a file, give them out for students to look at. Otherwise, tell them to re-read the model on page 55. Say *Tell me a fact about the restaurant being reviewed.* Ask two or three students to provide facts. Then say *Now tell me an opinion about the restaurant.* Ask several students to give opinions from the review.

Present

- Tell students to open their books at page 133 and study the mural in the photograph. Say *Today we're going to review a piece of art. We're going to write facts and opinions. Let's practise. Look at the photo of a mural. Write one fact and one opinion.* Model by saying *This mural was painted on a water tower.* Then ask if what you said is a fact or opinion. (fact) Continue by saying *The bright colours are beautiful.* (opinion) Allow time for students to write a fact and an opinion about the mural. Then ask several students to share what they wrote.
- Tell students to turn to page 139. Direct them to the green box at the top of the page. Read aloud the information and tell students to follow along. Say *The last time we wrote a review, we focused on facts and opinions. When we write an art review, we still use facts and opinions to describe a piece of art. In order to understand the facts and form meaningful opinions,*

you need to know about the work you're reviewing. You want to include information about the artwork in the review.

- Read each of the questions in the green box aloud and write them on the board:

> What do you see?
> Why did the artist create the work?
> How did the artist create the work?
> What is your reaction to the work?

- Say *We need to answer these questions to write our art review. In order to do that, we'll need to learn more about the artwork.* Tell students to turn back to the mural on page 133 and answer the questions about it. Guide them to provide detailed information. If necessary, replay **Track 106** so that students have information to answer the questions.

Read the Model 1 2

- 1 Say *Let's read a model of an art review.* Read the instructions aloud. Then say *As you read, think about how the writer answers each of the four questions.* Put students into pairs and tell them to take turns reading paragraphs aloud. After each paragraph, students should re-read it and underline answers to any of the four questions.

- When students finish, review the model as a class. Read each question aloud and ask students to read the answers from the model.

- 2 Say *In the review, we learn that the writer likes the artwork. What does he or she say to signal this?* Ask students to cite evidence from the last paragraph. Then say *Now discuss with a partner whether or not you agree. If you agree, explain what you like about it. If you disagree, say what you don't like.* Walk around to listen to students' discussions. Then have a class discussion about students' opinions.

- **Worksheet** If your students need a reminder of the elements of a review, you may want to hand out the **Review Genre Writing Worksheet** and go over it together.

BE THE EXPERT

Writing Support

Usage Remind students to be careful of tense usage when writing an art review. When they are describing the composition of the artwork and their personal reactions to it, they will likely use the present tense. When giving information about the artist, his/her technique and the historical context in which the piece was created, students should use narrative tenses (past simple, past continuous, past perfect and past perfect continuous). Encourage students to read their completed first drafts aloud to make sure their tense usage sounds right to them before they revise and submit their reviews.

Teaching Tip

It can be helpful to model new content using previously taught material. For example, in this lesson, you are encouraged to revisit the writing model for Unit 3 and artwork that was presented earlier in the unit. Doing this allows students to apply new information to what they already know. It also reviews and reinforces information and skills that students learnt earlier. Students may connect to the new information more easily when it's presented in a familiar context.

Workbook For scaffolded Writing support, assign Workbook page 86.

Online Workbook Writing



WRITING

In an art review, you need to give both facts and opinions. Research the artwork and its artist to help you understand the work and the context it was created in. In your review, answer the following questions:

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2 **Work in pairs.** What is the author's opinion of the artwork? Do you agree? Why or why not?

3 **Write.** Write a review of a piece of artwork that you've seen in this unit or elsewhere. Make sure you research the work. Include facts and opinions in your review.

WRITING 139

Plan 3

- 3 Say *Now you're going to choose a piece of art that you've seen in this unit or elsewhere. Once you choose the work, use books or online resources to learn more about it.* If your school has a library, you may want to make an appointment for students to do research there or check out art history books to bring to class. Or, guide students to online museum galleries as a source for artwork and information. Say *Remember to look at the four key questions and find information in your research that will help you answer them.* Remind students to present facts first and then conclude with their opinion of the piece.

- **Worksheets** If your students need a reminder of any of the steps of process writing, hand out **Process Writing Worksheets 1–5** and review them together.

- **Workbook** Refer students to Workbook page 86 to help them organise and plan their writing.

Write

- After students have finished their pre-writing, tell them to work on their first drafts. If you don't have enough time for students to complete the first draft in class, assign it as homework.

Revise

- After students finish their first drafts, remind them to review their writing for clarity and organisation. Tell students to consider the following: *Do I give both facts and opinions? Do I answer all four questions accurately and completely? Are the ideas connected in a logical way? What needs more work?*

Edit and Proofread

- Remind students to consider elements of style, such as sentence variety, parallelism and word choice. Then remind them to proofread for mistakes in grammar, punctuation, capitalisation and spelling.

Publish

- Publishing includes handing in pieces of writing to the teacher, sharing work with classmates, adding pieces to a class book, displaying pieces on a classroom wall or in a hallway and posting on the Internet.

Writing Assessment

Use these guidelines to assess students' writing. You can add other aspects of their writing you'd like to assess at the bottom of the table.

4 = Excellent
3 = Good
2 = Needs improvement
1 = Re-do

	1	2	3	4
Writing Ideas are clear and well organised. Student gives both facts and opinions and answers all four questions accurately and completely.				
Grammar Student uses two- or three-word phrasal verbs in the review.				
Vocabulary Student uses a variety of word choices, including words used in this unit.				



Connect Through Art

'We use art as a way to bind society together.'

Stephen Alvarez
National Geographic Photographer

1. **Watch scene 8.2.**
2. Stephen says that art is a way to 'bind society', or connect people together. Think of an example of public art in your community. How does it bring people together?
3. Even if you don't create your own art, you can use art to connect with others. List three ways you can do this.

MISSION

Objectives
Students will
- talk about the role of art in their community.
- talk about ways to use art to connect with others.

Resources Video scene 8.2 (DVD/Website/CPT); Worksheet 4.8.6 (Teacher's Resource CD-ROM/Website); Online Workbook: Meet the Explorer; CPT: Mission

BE THE EXPERT

Teaching Tip

Art can be very a useful teaching tool. Posting art in your classroom not only makes it more inviting, it also provides a visual stimulus for discussions and written work. Find several interesting pieces of art and display them in your room. Make reference to the artwork when practising vocabulary and grammar. (e.g., *The painting, which was made in the nineteenth century, ...*) Change your display every few weeks to offer visual variety and new pieces for discussion.

Online Workbook Meet the Explorer

Mission

- Read aloud the mission *Connect Through Art*. Say *We've discussed how we can connect to other people, places and times though art. We saw examples of this with the cave art from 36,000 years ago. What other art connections did we make in this unit?* Ask several students to respond. Then ask a student to read Stephen Alvarez's quote aloud. Say *Stephen reminds us that art is used to bind, or bring, society together. What does he mean by* society? (people as a whole) *Do you think he's talking only about modern society?* (no) Say *That's right. He's talking about generations of people. Art can connect us with societies from thousands of years ago.*
- **Activity 1** Say *Now let's watch a video about Stephen Alvarez.* Play **Video scene 8.2**. Tell students to focus on Stephen's techniques for capturing good photographs.
- **Activity 2** Talk about public art in your community. Remind students that public art can be murals, paintings, sculptures, fountains, landscapes or interactive displays. Ask students to think about how the artwork they chose fits into a public space where people come together. Ask *Is art the reason why people come to this space? Does the art lead to discussion?* Tell students to consider the answers to these questions in their discussion.
- **Activity 3** Tell students to work in groups to create their lists. Tell them to think of both real-life and virtual methods that help people connect through art. Allow time for students to share their ideas in class.
- **Worksheet** Assign **Worksheet 4.8.6.** Explain that students will use the worksheet to further discuss Stephen Alvarez and art connections.

PROJECT

Objective
Students will
- choose and complete a project related to art connections.

Academic Language *compile, compare, context, display, quotation, recreate*

Content Vocabulary *auction, bidder, cardboard*

Resources Assessment: Unit 8 Quiz, Units 5–8 Mastery Test, Final Test; Workbook pages 87 and 96; Worksheet 4.8.7 (Teacher's Resource CD-ROM/Website); CPT: Make an Impact and Review Games

Materials a coffee-table book of art; cardboard; chalk, coloured pencils or crayons; pretend money *(optional)*

Assessment Go to pages 262–264.

Unit Review Assign Worksheet 4.8.7
Workbook Assign pages 87 and 96.
Online Workbook Now I can

Make an Impact

YOU DECIDE **Choose a project.**

1 Hold an art auction.
- Choose three pieces of art to bring to class.
- Prepare a short description of each piece of art. Talk about the artist, the context in which the artwork was created and its connection to modern life.
- Hold an art auction for your class. Display each piece and describe it. Try to sell each item to the highest bidder.

2 Create an art book.
- Research artwork and quotations about artwork. Select five of each.
- Compile the artwork and quotations into a decorative art book.
- Present your book to the class. As you share, explain your connection to the artwork and the quotations.

3 Re-create cave art.
- Choose a cave that you have learnt about in this unit, or another cave with prehistoric paintings.
- Research the specific images found on the cave wall. Learn about the medium and the technique used.
- Recreate this art on a piece of cardboard. Present your artwork to the class. Explain what it represents and how you did it. Compare the process to that of the original artists.



Still Life with Apples by Paul Cézanne, 1894



The Houses of Parliament, Sunset by Claude Monet, 1903



Concert of Birds, Circle of Jan van Kessel (Anonymous), 1660/1670

Prepare

- YOU DECIDE Ask students to choose a project.
- **Activity 1** If students are not familiar with the concept of an auction, find an online video of an auction to share with them. Point out the words and gestures of the auctioneer and encourage students to model them. Tell students that they can bring in photos of famous artwork or any artwork that they have created themselves. Explain the concept of bidding. Students may enjoy bidding with pretend money during the auction.
- **Activity 2** Bring in a coffee-table book showing art or photography to give students the idea of the type of book they are to create. Explain that the quotation does not need to be from the artist being featured, but that it should somehow relate to the artwork to show the connection. Remind students to use reported speech as they present their books to the class.
- **Activity 3** Students can base their work on any of the cave art that they learnt about in this unit or art from another cave of their choice. Remind them that if they choose a different selection, they should provide information on the location and age of the art.

Share

- Schedule time for groups to present their final projects to the class. Bring in any necessary audio/visual equipment for presentations. Remind students that for Project 1, the audience will do the bidding. If students are using money, make sure each student starts off with the same amount.
- **Modify** Students who choose Project 1 can prepare a written explanation of how each piece of art connects with modern life. Project 2 could be presented as a blog entry for the class to review. Students who choose Project 3 might prefer to do a digital rendering of cave art and project it in class as they explain the process.

STUDENT'S BOOK AUDIO SCRIPT

Track 099 1 **Listen and read.** See Student's Book pages 128–129.

Track 100 2 **LEARN NEW WORDS** **accomplishment** / Cave art was an accomplishment of early humans. **artwork** / Paintings, sculpture and other artwork can bring people together. **come up with** / The artist comes up with an idea before beginning her work. **controversial** / The origin of art is a controversial topic. **depict** / Cave art depicts the beliefs and experiences of early peoples. **draw in** / Cave art has the power to draw people in and transport them to the past. **mark** / Painting is a way to leave a mark on a certain time or place. **medium** / Today, oil paint is a popular medium for painters. **power** / Art has the power to connect people across cultures. **perspective** / Art can affect how you think and change your perspective. **preserve** / Many ancient paintings are preserved on cave walls. **primitive** / People think cave art is primitive, but it's actually very sophisticated. **reaction** / Political art causes strong reactions in people. **technique** / One technique used by early artists was painting with stone tools. **track down** / Researchers are working to track down the exact origins of art.

Track 101 5 There is a significant difference between the daily life of Parisians and the underground world that exists beneath the city. Below the streets, there are hundreds of miles of tunnels with pipes, sewers, subways and the Catacombs. Inside the Catacombs, the remains of some six million Parisians can be found, arranged in dramatic displays. Neat rows of skulls hide piles of bones that have been there since the eighteenth century, when King Louis XVI had them buried so that he could close some of the city's cemeteries.

Stephen Alvarez had the opportunity to take photographs of the catacombs for *National Geographic* magazine. He captured the world of the *cataphiles*, the people who spend their days exploring, creating art or just hiding underground. For these people, life underground is symbolic of freedom: there's no difference between day and night and there are no real rules. These dark, damp tunnels are quite a contrast from the decorative buildings and wide streets of the City of Lights just a few metres above them. But for the *cataphiles*, the experience of the underground is what makes the place beautiful.

Track 102 5 **LEARN NEW WORDS** **decorative** / Thousands of years ago, people used animal shells for decorative purposes. **dramatic** / The dramatic images on the cave's walls caused a powerful reaction. **impressive** / The complexity of ancient artwork is very impressive since artists didn't have modern tools. **symbolic** / The shapes painted on the walls may have been symbolic of people's religious beliefs.

Track 103 **SPEAKING STRATEGY** See Student's Book page 131.

Track 104 1 **S1**: Hey, Lea. Have you done your project on prehistoric art yet?

S2: Yes, I did it on the cave paintings in Lascaux, France. It was really interesting. Have a look at some of the photos that I'm using.

S1: What's that? It just looks like a bunch of dots to me. What does it mean?

S2: It appears that these dots actually recreate the constellations. The people who created this were documenting the stars as they appeared in the sky back then.

S1: Wow, cool. And what's this here? It looks like an animal. What do you think it is?

S2: It seems to me that it's a bull.

S1: A bull? I wonder why they would paint animals on the wall. I'd think that they would paint other people. Don't you think?

S2: Apparently, there was a symbolic connection between the art and hunting, which was a key part of life in those days. This seems to represent their success in hunting.

S1: Hmm ... I'd like to make a mark of my accomplishments on my wall. Maybe I'll paint a basketball each time I win a game!

S2: I bet your mum won't find your art quite so fascinating!

S1: Yeah, you're probably right about that!

Track 105 **GRAMMAR** See Student's Book page 132.

Tracks 106 and 108 2 3 Today we're going to study the work of Brazilian street artist, Eduardo Kobra. As an adolescent, Kobra preferred art to schoolwork. Eventually, he began working as a street artist. His first critics were people walking by, who would look at him working and tell him to 'get a job'. In the early days, street art wasn't always accepted as 'art'. Eventually, it became more common for building owners to ask artists to paint their buildings.

Now, people admire Kobra's enormous murals in cities all over the world – from Dubai to New York. No matter the topic, these murals stand out for their interesting use of geometric shapes and bold colours. You should recognise the subjects of his murals. Many of them are portraits of people like Mahatma Gandhi, Abraham Lincoln and Nelson Mandela. Honouring the memory of historical figures is a common theme of Kobra's work.

Kobra uses different techniques to create his murals. He uses paintbrushes and spray paint. He changes his technique based on the size and type of surface he's working on.

Now look at some of his most famous murals. What do you think of Kobra's style? Can you choose a favourite from these murals?

Track 107 2 **LEARN NEW WORDS** **admire** / People on the street can admire murals on the side of a building. **bold** / Kobra's murals are known for their bold colours. **critic** / Critics have had different responses to Kobra's art. **theme** / A common theme in Kobra's work is honouring past people and events.

Track 109 2 **LEARN NEW WORDS** **detailed** / Although Willard's work is small, it is very detailed. **exhibition** / Visitors to Willard's exhibitions need to look through a microscope to see his work. **honour** / Willard's work has been honoured by many people around the world. **miniature** / These miniature sculptures are too small to see without a microscope. **needle** / The sculptures fit inside the eye of a needle.

Track 110 3 **WHILE YOU READ** See Student's Book pages 134–135.

Track 111 **GRAMMAR** See Student's Book page 138.

Track 112 1 **Express Yourself** See Student's Book pages 142–143.

Express Yourself

Objectives
Students will
- read information about a contest and an entry into the contest.
- connect ideas about creative problem-solving and art.

Content Vocabulary *ceiling, contest, entry, joke*

Resources Workbook pages 88–89/ Online Workbook (Units 7–8 Review); Worksheet 4.8.8 (Teacher's Resource CD-ROM/Website); Track 112 (Audio CD/Website/CPT); CPT: Express Yourself Units 7–8



Express Yourself

1 **Read and listen to information about a contest and an entry to the contest.** SB 112

CALLING ALL CREATIVE TYPES!

Have you got a problem you'd like to solve? Well, come up with a solution!

All Tech Today is sponsoring a contest to help young inventors take a concept and make it a reality.

WINNERS RECEIVE:
- a four-year scholarship for high-tech education
- resources to help build your device
- support in getting your device on the market

To enter, draw a design of your concept. Write an essay to explain your idea and how it's useful.

Droidganiser

Submitted by Alexandra Poulos, age 16

Like most people my age, I hate tidying my room. My mum always tells me that if I don't like doing it, I can save my money to buy a robot that will tidy for me. She's joking, of course, but her joke gave me an idea. What if I really *could* get a robot to tidy my room?

As a member of my school's robotics club, I'm learning that it might actually be possible to make, not buy, this robot. My idea, *Droidganiser*, would build on technological devices that already exist to help around the house. Currently, there are robotic devices that vacuum and mop the floor using sensors to control their movement. Robots also have the ability to pick things up with robotic limbs. *Droidganiser* would combine these applications into a single device.

What would really set *Droidganiser* apart from current devices is its monitor. A *Droidganiser* owner would put the monitor on the ceiling somewhere in the room. The person would clean and tidy the room the first time and then use the monitor to take a photo of how the room should look. The monitor would store this information. Then it would monitor the room from the ceiling. Whenever the room doesn't match the photo, *Droidganiser* would automatically fix the problem. It would pick up clothes or books on the floor and put them away. It might also make the bed. *Droidganiser* could even be programmed to vacuum, dust or clean the windows!

Anyone would be happy to have a *Droidganiser* to do the dirty work. If only *Droidganiser* existed now! People could be using their time to study, play sports or hang out with friends – not cleaning!

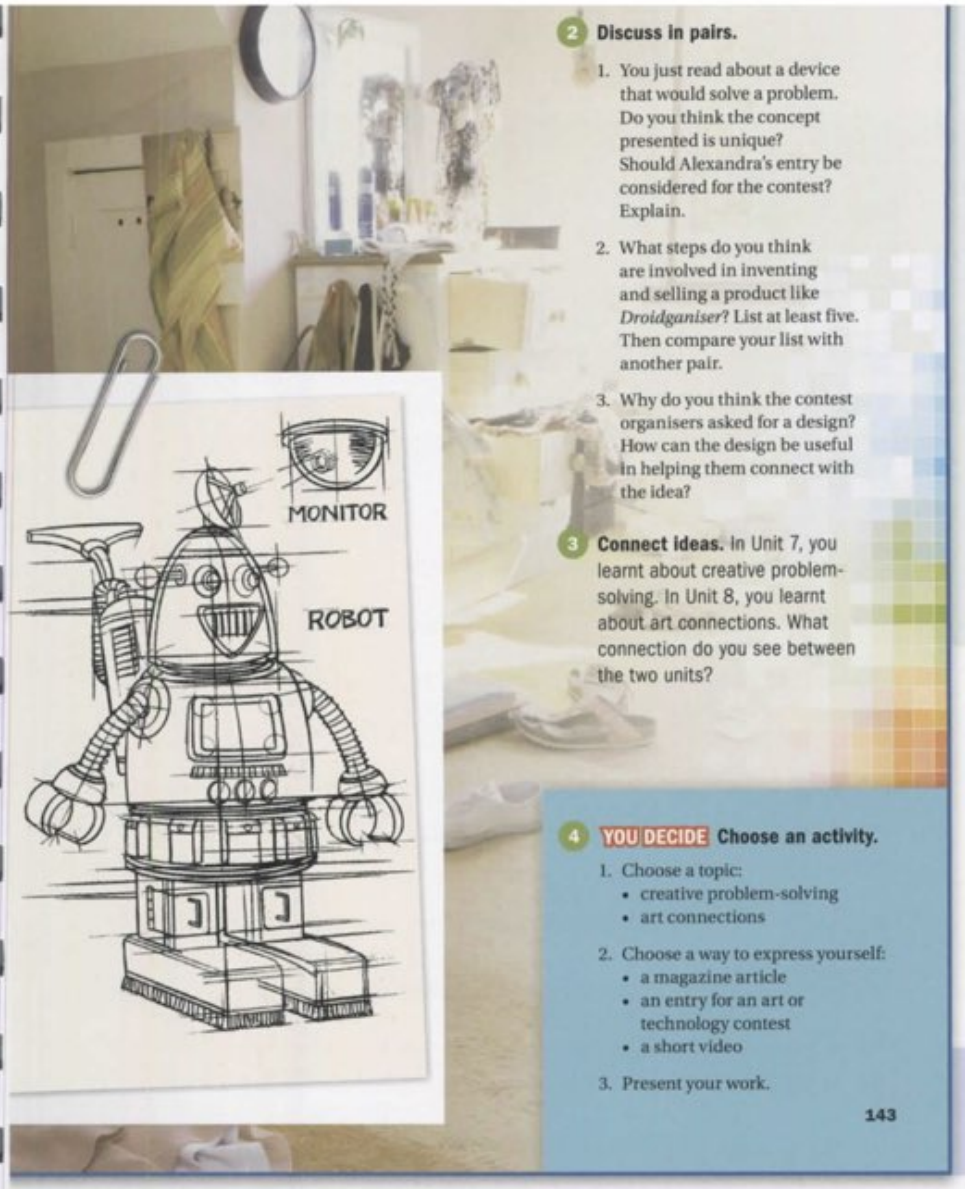
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Present 1

- **Preview** Tell students to turn to pages 142–143. Say *Look at the drawing on the page.* Ask *What is it of?* (a robot) *What does it seem to do?* (clean organise) *What do you think the purpose of the drawing is?* (to explain an idea)
- 1 **Read together** Say *We're going to hear and read information about a contest.* Play **Track 112** and pause after the contest information is read. Ask *Who's sponsoring the contest?* (a tech magazine) *What is the purpose of the contest?* (to get young people to design and innovate) *What is the prize?* (a scholarship, resources and support in creating the innovation)
- Say *Look at the drawing.* Continue playing **Track 112.** As students listen, tell them to think about why the speaker wants to create *Droidganiser* and how the device will work.

Practise 2

- 2 **Discuss** Tell students to work in pairs. Say *Re-read the description and study the design. Do you know of any robotic products that are similar to* Droidganiser? *If so, which ones?* If students aren't able to name any products, give an example, such as a robotic vacuum cleaner. Then say *As you discuss the first question, think about what makes* Droidganiser *stand out from these products.*
- In order to answer the second question, students may want to research the development of a specific product to get an idea of the steps that are involved.
- As students discuss the third question, tell them to think about a time that they included a drawing or diagram with something they have written.



2 **Discuss in pairs.**

1. You just read about a device that would solve a problem. Do you think the concept presented is unique? Should Alexandra's entry be considered for the contest? Explain.
2. What steps do you think are involved in inventing and selling a product like *Droidganiser*? List at least five. Then compare your list with another pair.
3. Why do you think the contest organisers asked for a design? How can the design be useful in helping them connect with the idea?

3 **Connect ideas.** In Unit 7, you learnt about creative problem-solving. In Unit 8, you learnt about art connections. What connection do you see between the two units?

4 **YOU DECIDE** **Choose an activity.**

1. Choose a topic:
   - creative problem-solving
   - art connections
2. Choose a way to express yourself:
   - a magazine article
   - an entry for an art or technology contest
   - a short video
3. Present your work.

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BE THE EXPERT

Teaching Tip

As your class comes to a close, ask students for feedback. Prepare survey questions about the class. You can ask about the level of interest, the level of difficulty, the workload, the classroom and any other relevant topics. Include space for students to add comments. Ask students to complete the survey anonymously and use their responses to inform your approach for the next time you teach this course.

Cumulative Review

Distribute Cumulative Review Worksheet 4.8.8.

Formative Assessment

Can students

- read information about a contest and an entry into the contest?

  Ask students to explain what the *Droidganiser* is and why it's being presented.
- connect ideas about creative problem solving and art?

  Ask *How are art and design a part of innovation?*

Workbook Assign pages 88–89.
Online Workbook Units 7–8 Review

Connect 3

- **3** **Critical thinking** Read the Activity 3 text aloud. Say *During your discussion, consider the following questions:* How are art and creativity connected? Can you think of times when art has been useful in solving problems? When? Why is it important for innovators to provide visual information about their ideas? Have students share their ideas with the class.

Prepare 4

- Review the instructions for Activity 4. You may want to assign this activity in advance.
- **4** **YOU DECIDE** Tell students to choose an activity. Remind students who choose the magazine article that they should either write about innovation or art. If they choose innovation, tell them to include and describe designs. If they choose art, tell them to include photos of the artwork they focus on or create their own!
- Guide students who choose the second option to come up with an entry for the contest advertised on page 142. Students may also choose to create an artistic entry for the contest but should use language from Units 7 and 8 to present their work to the class.
- Students who choose the video might enjoy creating a video of a visit to a local museum (if the museum permits video). Or students may want to create a video about the importance of design in technological gadgets and the Internet.

Share

- Set aside time for students to share their work with the class. Remind students to listen actively by focusing on the speaker or presenter. Tell them to write at least one question that they have for the presenter. Then allow several minutes for questions and answers after each presentation.

ASSESSMENT

Resources Unit 1 Quiz *(ExamView®)*

BE THE EXPERT

Testing Tip

Before your first assessment, explain procedures and rules to students. For example, explain your process for distributing and collecting the test. Tell students what they're permitted to do after finishing and remind them of things that they may not be permitted to do during assessment, such as talk or get out of their seat. If students know the expectations from the beginning, the process of testing will be easier throughout the course.

Unit 1 Quiz

Before the Quiz

1. To generate the quiz, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your quiz a title (for example: Unit 1 Quiz).
3. Select the Unit 1 question bank and select all items. Quizzes include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this quiz or create your own.

4. Print the quiz. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Quiz

- Hand out the quiz and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 002** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Why should you challenge yourself?

  Describe a time when you took a risk. It can be physical or mental.

  Describe your role model. Why is this person your role model?

Unit 2 Quiz

Before the Quiz

1. To generate the quiz, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your quiz a title (for example: Unit 2 Quiz).
3. Select the Unit 2 question bank and select all items. Quizzes include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this quiz or create your own.

4. Print the quiz. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Quiz

- Hand out the quiz and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 003** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Describe a time when you helped others in need. What was the problem and what did you do to help?

  Talk about one of the inventions you read about in this unit. Why did you choose it and what do you like about it?

  What do you think about digital humanitarians? Is it something you would like to get involved in? Why or why not?

ASSESSMENT

Resources Unit 2 Quiz *(ExamView®)*

BE THE EXPERT

Testing Tip

Students may experience anxiety before assessment. If you notice a student who seems abnormally stressed or worried, take that student's assessment and place it on your desk. Allow the student to step out of the room for a few moments to relax and clear his or her mind. This is not a time for studying or checking notes, but rather a time to calm down and collect him/herself. When the student is ready, he or she should sit down and continue the assessment.

ASSESSMENT

Resources Unit 3 Quiz *(ExamView®)*

BE THE EXPERT

Testing Tip

Before giving a quiz or test, remember to check your bulletin boards, word walls and boards for words and structures that will appear on the assessment. Remove or cover any information that might give away answers.

Unit 3 Quiz

Before the Quiz

1. To generate the quiz, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your quiz a title (for example: Unit 3 Quiz).
3. Select the Unit 3 question bank and select all items. Quizzes include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this quiz or create your own.

4. Print the quiz. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Quiz

- Hand out the quiz and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 004** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Why is it important to know where your food comes from?

  Describe a food revolutionary that you admire. Why do you admire him or her?

  What are some foods from other cultures that you enjoy? Why do you enjoy them?

Unit 4 Quiz

Before the Quiz

1. To generate the quiz, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your quiz a title (for example: Unit 4 Quiz).
3. Select the Unit 4 question bank and select all items. Quizzes include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening, speaking, reading* and *writing*.

- You may choose to customise this quiz or create your own.

4. Print the quiz. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Quiz

- Hand out the quiz and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 005** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  What is the footprint of fun?

  What are some ways to reduce your footprint of fun?

  How would you convince your school to reduce its footprint of fun?

ASSESSMENT

Resources Unit 4 Quiz *(ExamView®)*

BE THE EXPERT

Testing Tip

As students take the quiz, walk around the room to ensure that they are on-task. If you notice that a student is off-task, approach his or her desk and quietly redirect attention back to the quiz. If you time your assessments, you may want to remind students periodically how much time they have remaining to encourage them to stay focused.

ASSESSMENT

Resources Units 1–4 Mastery Test *(ExamView®)*

BE THE EXPERT

Testing Tip

Review the Mastery Test before giving it and make sure that your lesson allows time for students to complete the test. If you worry that students might not complete the Mastery Test in one lesson, break the test into two parts.

- Generate the entire test and divide it into two parts: Vocabulary/Grammar/Listening and Speaking/Writing.
- Assign the Vocabulary/Grammar/Listening section first and collect it.
- Then, during the following lesson, administer the Speaking/Writing sections.

Units 1–4 Mastery Test

Before the Test

1. To generate the test, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your test a title (for example: Units 1–4 Mastery Test).
3. Select the Units 1–4 Mastery Test question bank and select all items. Tests include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this test or create your own.

4. Print the test. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Test

- Hand out the test and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 011** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Describe how you prepare for challenges and overcome obstacles.

  How can you have fun responsibly and also care about your surroundings?

  What advice would you give to someone who wants to be a role model?

Unit 5 Quiz

Before the Quiz

1. To generate the quiz, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your quiz a title (for example: Unit 5 Quiz).
3. Select the Unit 5 question bank and select all items. Quizzes include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this quiz or create your own.

4. Print the quiz. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Quiz

- Hand out the quiz and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 006** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  What can you learn from exploration? Explain.

  Name an explorer you read about and describe his or her discoveries.

  If you could go on an expedition, where would you go and why?

ASSESSMENT

Resources Unit 5 Quiz *(ExamView®)*

BE THE EXPERT

Testing Tip

Always remind students to check their work before handing in a quiz. No matter how confident they are, students may find that they've made errors or missed an item without realising it. For listening sections, tell students to check that they've completed all items before moving on to another section.

ASSESSMENT

Resources Unit 6 Quiz *(ExamView®)*

BE THE EXPERT

Testing Tip

Tell students to look over the entire quiz before allowing them to ask any questions about instructions or vocabulary (other than what's being assessed). Discuss their questions as a class. Doing so will help prepare everyone better, not just the students with the questions.

Unit 6 Quiz

Before the Quiz

1. To generate the quiz, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your quiz a title (for example: Unit 6 Quiz).
3. Select the Unit 6 question bank and select all items. Quizzes include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this quiz or create your own.

4. Print the quiz. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Quiz

- Hand out the quiz and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 007** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Describe a modern-day 'giant'. Why did you choose it?

  Give two examples of giants mentioned in this unit. How are they similar? How are they different?

  What do you think the mission 'Make Big Plans' means? Describe what it means to you.

Unit 7 Quiz

Before the Quiz

1. To generate the quiz, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your quiz a title (for example: Unit 7 Quiz).
3. Select the Unit 7 question bank and select all items. Quizzes include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this quiz or create your own.

4. Print the quiz. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Quiz

- Hand out the quiz and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 008** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Talk about a problem you had and describe how you solved it.

  Describe an invention that has helped people. Explain why you chose that invention.

  Based on this unit, give an example of creative problem-solving. How is it useful to you?

ASSESSMENT

Resources Unit 7 Quiz *(ExamView®)*

BE THE EXPERT

Testing Tip

Some students will complete the quiz more quickly than others. Keep high-interest English-language reading materials in your classroom. When a student finishes a quiz, tell him/her to hand it in and quietly select an item to read until the others have finished. If you'd prefer that students stay seated during an assessment, simply tell students to put their hands up as they complete their quiz and take a book or magazine to their desk for them.

ASSESSMENT

Resources Unit 8 Quiz *(ExamView®)*

BE THE EXPERT

Testing Tip

Reviewing information just before a quiz can help students perform better, especially as the information they're learning becomes increasingly complex. Begin assessment lessons with a whole-class question-and-answer session. Tell students to go through the unit and generate questions that they have. Allow five minutes to review before handing out the quiz.

Unit 8 Quiz

Before the Quiz

1. To generate the quiz, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your quiz a title (for example: Unit 8 Quiz).
3. Select the Unit 8 question bank and select all items. Quizzes include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this quiz or create your own.

4. Print the quiz. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Quiz

- Hand out the quiz and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Tracks 009 and 010** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Describe your favourite piece of art – it can be a painting, a photograph or a sculpture. What do you like about it?

  How do you think people are connected through art?

  Do you think art should be kept in museums, or should it be out in the open for everyone to see? Why?

Units 5–8 Mastery Test

Before the Test

1. To generate the test, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your test a title (for example: Units 5–8 Mastery Test).
3. Select the Units 5–8 Mastery Test question bank and select all items. Tests include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening*, *speaking*, *reading* and *writing*.

- You may choose to customise this test or create your own.

4. Print the test. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Test

- Hand out the test and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 012** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Imagine you discovered a giant fossil. Describe where you found it, how you found it and what you did with it.

  Describe an invention you would like to make. What does it look like, what does it do and what problem does it solve?

  Why is it important to work together as part of a team? Explain.

ASSESSMENT

Resources Units 5–8 Mastery Test *(ExamView®)*

BE THE EXPERT

Testing Tip

Make sure you give students feedback on their Mastery Tests, even if it means sending a report home after the test has ended. You may just wish to share a mark or a percentage of correct answers, or you might want to provide more specific feedback, which could be done in an email or a phone call.

ASSESSMENT

Resources Final Test *(ExamView®)*

BE THE EXPERT

Testing Tip

Review content regularly to help reinforce learning and to better prepare students for assessments. Periodically recognise and reward successful students. Encourage students to take notes on their own to help them review topics with which they feel less comfortable. Students might use different colour highlighting to help them differentiate important vocabulary or grammar topics.

Consider providing students with marking criteria or a rubric before they take a test so they understand how the test will be marked and how each portion of a test contributes to the whole.

Final Test

Before the Test

1. To generate the test, go to *ExamView® Test Generator* and select *Create a new test using a wizard*.
2. Give your test a title (for example: Units 1–8 Final Test).
3. Select the Units 1–8 Final Test question bank and select all items. Tests include questions that assess comprehension of vocabulary and grammar, as well as all four skills: *listening, speaking, reading* and *writing*.

- You may choose to customise this test or create your own.

4. Print the test. Then make copies for each student in your class.

- For additional review, use the end-of-unit games in the **Classroom Presentation Tool**.

Giving the Test

- Hand out the test and tell students to read the instructions. Clarify instructions if necessary.
- For the listening comprehension activities, you can play **Track 013** or you can read the audio script available on the *ExamView®* CD-ROM and also on the Teacher's Resource Website.
- For the speaking section of the assessment, you can use the questions on *ExamView®* and these additional questions:

  Do you think you would be a good explorer? Why or why not?

  Why is it important to have role models?

  Describe why food matters.

  How does technology help us connect with others during emergencies?

Unit 1

Pushing the Limits

1 Match the word to its definition or description. Write the letter on the line.

g 1. mental	a. Someone who plays against you.
d 2. obstacles	b. He learnt skydiving. He realised his dream.
b 3. achieved	c. It's something that separates two places.
f 4. hazardous	d. It's too high. I can't touch it.
c 5. boundary	e. A difficult puzzle provides this type of challenge.
h 6. physical	f. The desert conditions were dangerous.
a 7. opponent	g. He faces many difficulties.
d 8. unreachable	h. Mountain climbing requires this type of strength.

2 Fill in the blank with the correct word from Activity 1.

1. She achieved her goal and won the gold medal.
2. There were many obstacles to overcome.
3. The weather conditions were extreme and hazardous.
4. This difficult maths problem requires great mental effort.
5. The top of the mountain was unreachable.
6. He beat his opponent.
7. These trees mark the boundary between the two houses.
8. Rock climbing takes unbelievable physical effort.

3 Look at the pictures. Then listen to each situation. Choose the correct word from the box and write it under the picture that describes it. track 1

determination | endurance | extreme | opponent | pain | push himself | role model



determination



extreme



endurance



pain



push himself



role model

4 Write. Use each word from Activity 3 in a sentence. Possible answers

1. I can't exercise anymore. I pushed myself to the limit.
2. I ran a marathon. I'm in a lot of pain.
3. She achieves great results. She works hard. She is my role model.
4. Extreme sports are becoming more and more popular.
5. Marcia never gave up; she reached her goal with determination.
6. Tom needed unbelievable endurance to continue with strength training.

GRAMMAR

Embedded clauses, questions and commands

I think ... Avalanches are very dangerous.	I think **avalanches are** very dangerous.
I wonder ... How difficult is that climb?	I wonder **how difficult that climb is.**
Do you know ... Is it safe to climb that mountain in autumn?	Do you know **if it's safe to climb that mountain in autumn?**
I'm telling you ... Be careful on the ice!	I'm telling you **to be careful on the ice!**

You can make statements, ask questions or give commands indirectly using verbs like *think, wonder* or *tell*. When you ask an indirect question, pay attention to word order. If the answer to a question is *yes* or *no*, you need to use *if*. When you give an indirect command, you need to use *to* followed by an infinitive.

1 Read the sentences. Re-write them using embedded statements, questions and commands.

1. Non-traditional sports are becoming popular.
   I think non-traditional sports are becoming popular.
2. Buy the right equipment for surfing.
   I'm telling you to buy the right equipment for surfing.
3. How many ski races do you go to every year?
   I'd like to know how many ski races you go to every year.
4. How do we get to the top of the mountain from here?
   We're not sure how we get to the top of the mountain from here.
5. Why do people push themselves to their limits?
   I wonder why people push themselves to their limits.
6. Put away the mountain bike.
   My mum is asking me to put away the mountain bike.

2 Unscramble the words. Write embedded statements, questions and commands. Pay attention to word order.

1. role / good / models / think / set / I / examples
   I think role models set good examples.
2. extreme / I / endurance / guess / sports / unbelievable / require
   I guess extreme sports require unbelievable endurance.
3. when / next / the / wonder / marathon / I / is
   I wonder when the next marathon is.
4. sporting events / go to / what / you / asking / I'm / you
   I'm asking you what sporting events you go to.
5. slow / I'm / down / you / asking / to
   I'm asking you to slow down.
6. snowboarding / he / a lot of / thinks / training / requires
   He thinks snowboarding requires a lot of training.
7. train / you/ during / if / the / like / months / winter / I'd / to know
   I'd like to know if you train during the winter months.



3 Listen. Write the questions as embedded statements. track 2

1. I wonder who your role model is.
2. Can you tell me what you do in hazardous conditions?
3. I'd like to know how many events you won this year.
4. I'd also like to know how many events you participate in each year.
5. I'm curious to find out what you do to overcome obstacles.
6. I'd like to know if you feel proud when you represent your country.

1 Listen and read. As you read, notice what makes Laura a good role model. V084



A **DETERMINED** YOUNG WOMAN

When Laura Dekker was 13, she had a dream. Her dream was to sail around the world on her own. Her passion for sailing started when she was young. She was born on a boat and spent the first five years of her life at sea. By the time she was seven, she was sailing in competitive races. Over the years, she learnt everything about sailing and weather systems. When she was ten, she bought her own sailing boat with money she saved. It seemed that there was no stopping her.

However, it wasn't easy to follow her dream. The main obstacle she faced was not hazardous weather, but her age. People told her she was too young. They said that sailing on her own was beyond her ability and that the journey could have serious consequences. With determination, however, Laura convinced everyone that she was capable of sailing around the world alone. She believed that her mental and physical skills enabled her to endure such a long journey.

Laura eventually set sail when she was 14. She sailed over 43,000 km (27,000 miles) and across 3 oceans. Her trip lasted 366 days. Life on the boat was a bit of a struggle, but she pushed herself. She had no fridge or washing machine. There was no shower and she had to repair everything herself. She spent weeks on her own but used her time well. She kept a diary and completed schoolwork to help her finish high school.

Laura's determination helped her achieve her dream. After her trip, she spent time speaking about her experiences to adults and young people. She also wrote a book about her travels. She hasn't stopped sailing and says, 'I still have a lot of dreams. You can never have enough of them.'

2 Read. Circle the correct answers.

1. Laura wanted to sail because _____.
   a. she bought a boat (b. it was her dream)
2. Laura spent the first years of her life _____.
   (a. on a boat) b. on land
3. The main obstacle Laura faced was that she _____ to sail around the world on her own.
   (a. wasn't the right age) b. had the right skills
4. It was Laura's _____ that helped her achieve her dream.
   a. studies (b. determination)
5. While she sailed around the world, she _____.
   a. repaired the washing machine (b. wrote and studied)
6. Laura _____.
   (a. still sails and has dreams) b. spends all her time inspiring others

3 Read the article again. Fill in the timeline with Laura's age and the important event that happened at that point in her life.

LAURA'S TIMELINE

AGE	0	1–5 years	7 years old	10 years old	14 years old	present
EVENT	Laura was born in 1995	years spent at sea	already competes in races	buys first sailing boat	sails around the world alone	still sails; gives talks

4 Write. What do you need to do to accomplish your dream? Answers will vary.

My dream is to _____

_____

To achieve my dream I need to _____

_____

GRAMMAR

Adding emphasis

My brother prefers living in the country to living in the city.	**The place (where)** my brother prefers to live **is** in the country.
I really admire Cory Richards' determination.	**The thing (that)** I really admire about Cory Richards **is** his determination.
The hikers hated camping in hazardous weather.	**The reason (why)** the hikers hated camping **was** the hazardous weather.
I like kitesurfing. It pushes me to my physical and mental limits.	**What I like best about** kitesurfing **is that** it pushes me to my physical and mental limits.

We draw our listeners' attention to what is important by focusing on it. We say where, when, who, why or what at the beginning of the sentence.

1 Listen. Then complete the dialogues. V085







A: I love trying out new sports.
B: The thing (that) I want to try _____ is skydiving.

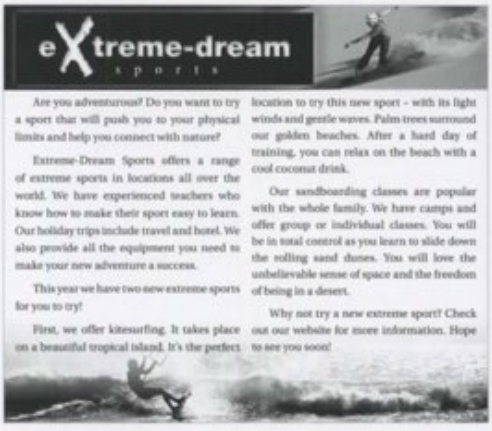
A: Skateboarding is great. You can do it anywhere.
B: The reason (why) I like skateboarding _____ is that you don't need a lot of expensive equipment.

A: I'm planning to go scuba diving in the Red Sea next year.
B: The place (where) I want to go scuba diving _____ is the Great Barrier Reef!

2 Read. Then write a sentence emphasising your preferences and reasons. Possible answers

1. I love summer holidays.
   The thing (that) I love about summer holidays is that we go to the beach every day.
2. I like to travel and explore other countries.
   The place (where) I would like to travel and explore is São Paulo, Brazil.
3. I really want to meet a famous photographer.
   The person (that) I really want to meet is Cory Richards.
4. I prefer team sports.
   The reason (why) I prefer team sports is that you have to work with others.

3 Read the advertisement. Answer the questions. Give your reason and make sure you add emphasis in your answers.



Are you adventurous? Do you want to try a sport that will push you to your physical limits and help you connect with nature?

Extreme-Dream Sports offers a range of extreme sports in locations all over the world. We have experienced teachers who know how to make their sport easy to learn. Our holiday trips include travel and hotel. We also provide all the equipment you need to make your new adventure a success.

This year we have two new extreme sports for you to try!

First, we offer kitesurfing. It takes place on a beautiful tropical island. It's the perfect location to try this new sport – with its light winds and gentle waves. Palm trees surround our golden beaches. After a hard day of training, you can relax on the beach with a cool coconut drink.

Our sandboarding classes are popular with the whole family. We have camps and offer group or individual classes. You will be in total control as you learn to slide down the rolling sand dunes. You will love the unbelievable sense of space and the freedom of being in a desert.

Why not try a new extreme sport? Check out our website for more information. Hope to see you soon!

1. Which extreme sport would you love to try? Possible answers
   What I would love to try is sandboarding because I have never been in a desert.
2. Why would you want to try one of these extreme sports?
   The reason I want to try sandboarding is that I have never tried an extreme sport.
3. What would you love about sandboarding or kitesurfing?
   What I would love about kitesurfing is that I could fly.
4. Where would you really want to go on your next holiday?
   Where I really want to go on my next holiday is Egypt because I want to see the pyramids.

WRITING

A biography tells the story of a person's life. We use words and expressions to help us connect ideas and describe the main events chronologically, in the order they happened.

- at first
- afterwards
- eventually
- later on
- little by little
- more recently
- today
- ultimately

1 Organise.

1. Your topic is the *Biography of an athlete*. Do some research on the Internet about different athletes. Choose an athlete who inspires you and who you feel is a good role model for others. Use the writing box below to write the main events of the athlete's life in the correct order. Add dates. Choose events that show how your athlete became the role model he/she is today.

Name of athlete: _____
Born:
Event 1:
Event 2:
Event 3:

2. Plan your writing. You'll need an introductory paragraph with a topic sentence. Your topic sentence should state that you are going to write a biography about an athlete who is a role model for others. Explain why you have chosen this particular athlete. Write your explanation here:

_____

Write three paragraphs. Use the expressions above and your notes from the table to guide you. Describe your athlete's achievements using the words *at first* in your first paragraph, *afterwards* in your middle paragraph, and *eventually/little by little* and *more recently/today* in your third paragraph.

Finish your biography with a brief statement of why this athlete is a good role model.

2 Write.

1. Go to page 21 in your book. Re-read the model and writing prompt.
2. Write your first draft. Check for organisation, content, punctuation, capitalisation and spelling.
3. Write your final draft. Share it with your teacher and classmates.

Now I can ...

- **talk about extreme sports and overcoming obstacles.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Why do you think Cory and Amy are featured in this unit?
Possible answer: They both push themselves mentally and physically.

What extreme sport or mental challenge would you like to try? Why?
Answers will vary.

- **use embedded statements, questions and commands.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Make sentences to form embedded statements, questions and commands.

I think ...	How will I beat my opponent?
I'm asking you to ...	Some extreme sports are too dangerous.
I wonder ...	Push yourself and do your best.

I think some extreme sports are too dangerous.
I'm asking you to push yourself and do your best.
I wonder how I will beat my opponent.

- **use different word order for emphasis.** *Possible answers* ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

I have always wanted a house on the beach.
The place (where) *I have always wanted a house is the beach.*

I would like to try sandboarding.
The extreme sport (that) I would like to try *is sandboarding.*

I love where I live because I can do a lot of sports.
The reason (why) *I love where I live is because I can do a lot of sports.*

- **write a biography of an athlete who is also a role model.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Write about an athlete. Use the words in the box.

at first **later on** **more recently** **was born in**

YOU DECIDE **Choose an activity.** Go to page 90.

Unit 2
It Takes a Village

1 Read. Complete the sentences. Then do the puzzle.

1. Photos taken from the air help us understand the *scale* of the disaster.
2. When you *measure* something, you look for the size or quantity of it.
3. The cost of something is its *amount*.
4. A social *network* connects information between people and electronic devices.
5. Facts and information are examples of *data*.
6. In times of *crisis*, people often help each other.
7. Researchers *monitor*, or watch, something for a special purpose over a period of time.
8. An *update* is the most recent information, such as news.
9. Computers *process* information or data very quickly.
10. Facts and signs provide *evidence* to show that something is true.
11. A *humanitarian* works to make other people's lives better.
12. To make something *expand* means to make it greater in size.
13. Crisis mappers analyse information and *generate* solutions.

1.					s	c	a	l	e			
2.				m	e	a	s	u	r	e		
3.					a	m	o	u	n	t		
4.			n	e	t	w	o	r	k			
5.					d	a	t	a				
6.				c	r	i	s	i	s			
7.	m	o	n	i	t	o	r					
8.					u	p	d	a	t	e		
9.				p	r	o	c	e	s	s		
10.	e	v	i	d	e	n	c	e				
11.	h	u	m	a	n	i	t	a	r	i	a	n
12.		e	x	p	a	n	d					
13.	g	e	n	e	r	a	t	e				

What's the secret word? *crowdsourcing* Write a definition using your own words.
Possible answer: Crowdsourcing is a way to send and collect information from a large number of people through online networking and social media.

2 Read. Circle the correct word.

1. After the typhoon, rescuers **uploaded** / **expanded** a lot of pictures on social media.
2. Rescuers use modern technology to **monitor** / **expand** conditions after a hurricane.
3. Small earthquakes and volcanic ash provided **data** / **evidence** that the volcano was about to erupt.
4. Scientists collected and analysed **crowdsourcing** / **data** for their research.
5. What if we went online and became digital **humanitarians** / **data** to help people in need?
6. Many organisations often use **crisis** / **crowdsourcing** to highlight environmental disasters and raise money.

3 Fill in the blanks with the correct words from Activity 1.

1. Crisis mapping is *evidence* that anyone can help those in need.
2. After an earthquake, a large *amount* of water and food must be sent to the scene.
3. Computers can *process* information more quickly than humans.
4. Rescuers can use technology to *monitor* conditions after a disaster.
5. Scientists analyse *data* and study it for its meaning.
6. *Humanitarians* work to help other people.
7. The news report gave the latest *update* about the destruction.
8. Avalanches can cause a major *crisis*.
9. The Internet allows people to *expand* their communication.
10. It's difficult to *measure* the level of the destruction after an earthquake.
11. A computer *network* helps people to share information.
12. Crisis maps help us see the *scale* of a disaster.
13. The results of her research always *generate* a lot of excitement.

GRAMMAR

Future tenses: Describing events in the future

Next summer, **I will co-ordinate** work at our local charity.

In the next few years, more people **will be collaborating** through crowdsourcing.

What **will you be doing** this time tomorrow?

By the end of next week, digital humanitarians **will have used** more data.

We use *will* + *infinitive* to talk about future events and situations. We also use it for predicting: *I think it will rain later.*

We use *will* + *be* + **-ing** to indicate an activity that is in progress at some point in the future.

We use *will* + *have* + *past participle* to indicate that an action will already be completed by a certain time in the future.

1 Listen and complete the table. Then answer the questions in full sentences. 2.008

Every day	go online	and	check	emails
Monday	look	at photos		
Tuesday	review	and	upload	photos
Wednesday	collect	and	send	text messages
Thursday	read	text messages		

1. Where will the students be volunteering?
They will be volunteering at school.

2. What will they use to identify buildings with serious damage?
They will use a red code.

3. Who will they be sending text messages to on Wednesday?
They will be sending them to translators.

4. Describe three tasks that the students will have done by Friday.
They will have looked at photos / identified damaged buildings / collected text messages / sent messages to translators / uploaded photos / read text messages.

2 Fill in the blanks. Complete each sentence with a word or words from the box.

donate | fundraiser | good cause | help out | network | volunteers

A

1. She wants to help out by cooking at the local community centre.
2. The Spring Fair, with all its activities, will be an excellent fundraiser.
3. We will be taking part in a bike ride across the country to raise awareness for a good cause.
4. Marzan has a network of friends who live all over the world.
5. Organisers are hoping that more volunteers will become digital humanitarians.

Match a sentence from A with a sentence in B. Write the number on the line. Underline examples of the future.

B

4 a. By the end of the year, he will have visited them all!
5 b. That way, they will be able to analyse data faster.
3 c. By the end of the journey, we will have travelled through every major city.
1 d. Next year she will give free cooking classes.
2 e. Last year it raised over €5,000 for cancer research. This year we hope it will raise even more money.

3 Answer the questions about your day tomorrow. Answers will vary.

1. Where will you be at midday tomorrow?

2. What will you be doing in the afternoon?

3. What will you have done by this time tomorrow?

1 Listen and read. As you read, think about how the title and the saying are connected. 2.009



The New Digital Global Community

There's an old saying: 'It takes a village to bring up a child.' This saying, or proverb, suggests that the community is just as important as the family when looking after a child. Both the family and the community share in the responsibility. Patrick Meier believes that new technologies do the same thing. He believes that digital technology is creating a global village where people care about and help each other in times of need.

One type of digital technology that has made it easy to be involved in local or global events is crowdsourcing. Now anyone can take action. All around the globe, people are networking for the greater good, and not only in times of crisis.

For example, digital volunteers have classified 4 million images of the surface of Mars. Without volunteers, this would have taken scientists many years to do.

In Russia, a mobile phone alert tells blood donors that someone in their local area with the same blood type needs a blood donation. In India, people are using 'unsmart' phones as a tool to report government actions.

In the United Kingdom, a site encourages older people who live alone to network and cook meals for each other. In the United States, a site for patients and families means they can share experiences of looking after very ill family members. It also provides a rich resource for medical researchers.

Nowadays, even animals benefit from digital technology! Across Africa and Asia, a website allows people to report on wildlife crimes.

The new digital global community is working together to research, explore, share and survive disasters. It's becoming a worldwide village with digital humanitarians ready to be responsible for making the world a better place to live in.

2 Read. Circle the best answer.

1. The reading describes how _____.
   a. a young engineer helped his community (b.) technology is bringing the world together
2. The reading gives _____.
   a. a description of village life in Africa (b.) examples of the world finding solutions to its problems
3. In the reading, the author suggests that _____.
   (a.) people are taking action locally and globally b. people only work together in times of natural disasters
4. The reading informs us that _____.
   (a.) the Internet and mobile phones are tools to help us face new challenges b. only people with the latest technology can be digital humanitarians
5. In the reading, we're given examples of how _____.
   a. to use computer and smartphone apps effectively (b.) networking and crowdsourcing can benefit scientific research, medicine and the environment

3 Look at the map. Add information that describes how each region uses crowdsourcing. Then research a different country or region that uses crowdsourcing. Add it to the map.



a. blood donations
b. share experiences with others who have ill family members
c. network and cook meals for each other
d. report wildlife crimes
e. report government actions
f. report wildlife crimes

Your idea: _____

4 Write. In your notebook, explain your understanding of the proverb, 'It takes a village to bring up a child.' How have people outside your family influenced you?

Possible answer: Everyone is responsible for teaching a child, not just the parents. A child can learn a lot from the experience and skills of teachers, friends, coaches and so on. In a community, we should all look out for and take care of each other.

GRAMMAR

Quantifiers: Expressing amounts

Half of / Fifty per cent of the population **is** an online user.	**A lot of / Two-thirds of / Sixty-seven per cent of** students **are** online users.
The majority of / Most of the community members **are** collaborating.	**The majority of / Most of** the community **is** collaborating.
A number of digital humanitarians **are** creating crisis maps.	**The number of** digital humanitarians **is** growing.

When you use expressions to talk about quantities, pay attention to the noun to decide if the verb is singular or plural. Remember that uncountable nouns take a singular verb.

The expressions *a number of* and *the number of* are used with plural nouns. *A number of* means *some* and takes a plural verb. *The number of* refers to a specific quantity and takes a singular verb.

1 Read. Underline the quantifiers. Then listen and tick **T** for *True* or **F** for *False*. Rewrite any false sentences as true. 5.008

	T	F
1. Half of the people on the planet have a mobile phone.	☐	☑
2. The number of text messages is increasing all the time.	☑	☐
3. One-third of all text messages contain a photo.	☐	☑
4. Less than 20 per cent of people who text are under 18.	☑	☐
5. A large number of people over the age of 65 send messages.	☐	☑

Two-thirds of the people on the planet have a mobile phone.

More than half of all text messages contain a photo.

A small number of people over the age of 65 send messages.

2 Listen. Circle the expression that summarises the information about the event. 5.009

1. (**A lot of**) / **A number of** people took part in the fundraising run.
2. **Over half of** / (**A small number of**) students didn't show up.
3. **Two-thirds of** / (**The majority of**) the runners were students.
4. **A third of** / (**More than 50 per cent of**) the runners finished the race in under an hour and 30 minutes.

3 Read. Then complete each sentence with a phrase from the box that can mean the same as the underlined words in the letter.

Dear Students



We are organising a Spring Fair at the school next month. We are very excited. We hope that by the end of the event, we'll have raised thousands of euros. This will help build a new home for the elderly in our community.

As you know from last year, hundreds of parents attend our event. At least 50 per cent of those parents will come with young children. We need five volunteers to do activities such as face painting and traditional games with the younger children.

We also need student volunteers to work at the stands. We will have 18 stands in total. Six of the stands will sell food. The rest of the stands will offer toys, crafts and books.

We really look forward to your participation and hope that you can help out some of the time at the Spring Fair for this important cause.

Yours faithfully

Mrs Torres

Head Teacher

the majority of	a small number of	half of	a lot of	a third of

1. The school wants to raise ___a lot of___ money for a good cause.
2. ___Half of___ the parents will come with young children.
3. The head teacher wants ___a small number of___ students to do activities with young children.
4. ___A third of___ the stands will sell food.
5. ___The majority of___ stands will sell toys, crafts and books.

WRITING

In persuasive writing, you need to convince your reader to share your opinion. It's important to state exactly why the reader should share your ideas and to support your statements with facts. The following expressions can help you:

- according to
- based on
- equally important / necessary
- especially
- it's clear that

1 Organise.

1. Your task is to *persuade your readers to take part in a local or global community service project*. Brainstorm projects that you are passionate about and choose one to write about. Write the name of your project on the line below. In the first column, list one or two reasons why people should join you in this campaign. In the second column, add important facts to support your reasons.

Name of your project _____

Reasons	Important Facts

2. Plan your writing. You'll need a general opening statement that describes the project and what needs to be done. For example: *There are nearly 2,500 items of rubbish for every kilometre on a beach! We need people to …*

   Write your topic sentence here.

   _____

3. You'll need two or three short paragraphs describing what work needs to be done and why it's important. Remember to provide evidence and/or facts in each paragraph to persuade your readers to join your project.
4. Finally, you'll need a concluding paragraph. It will summarise your campaign and include a 'call to action' on the part of your readers.

2 Write.

1. Go to page 37 in your book. Re-read the model and writing prompt.
2. Write your first draft. Check for organisation, content, punctuation, capitalisation and spelling.
3. Check your final draft. Share it with your teacher and classmates.

Now I can …

- **talk about digital humanitarians and crowdsourcing.** Possible answers ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

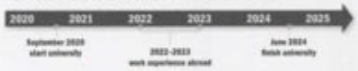
  How has technology helped to bring communities together?

  It has created a global village where people care about and help each other in times of need.

  How would you define a 'crisis map' to a friend?

  It's a digital map that measures the scale of a disaster and provides up-to-date information about a crisis.

- **use future tenses to describe events in the future.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.



  I ___will start___ university in September 2020.

  Between 2022 and 2023, I ___will be___ working abroad.

  By June 2024, I ___will have finished___ university.

- **use different expressions of quantity.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Choose the item that correctly completes each sentence.

  1. The school raised _____ money at the fundraiser.
     a. a number of (b.) a lot of
  2. _____ the community participates in crowdsourcing.
     a. The number of (b.) Half of

- **write a persuasive essay to convince someone to take part in a community service project.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.



  Persuade your friends to participate in cleaning up a nearby park. Write three sentences using the phrases below.

based on …	equally important …	It's clear …

  Possible answer: It's clear that there aren't enough litter bins in the park. Based on this fact, we need to write a letter to the park authorities and request more litter bins. Equally important is that, in the meantime, we clean up the park so people can enjoy it more.

YOU DECIDE **Choose an activity.** Go to page 91.

Units 1–2 Review

1 Read the text. Choose the best answer for each blank. The first one is done for you.

Vertical Ice Boundaries

You don't have to go out into (1) _b_ weather conditions to test your levels of (2) _a_. This (3) _b_ sport will really make you push yourself to your physical (4) _a_.

It doesn't matter if you are an experienced climber or not, our indoor ice walls will give you an (5) _b_ experience.

We have one-hour sessions every afternoon, but we also offer special training (6) _a_ once a month. Our qualified teachers help new climbers (7) _b_ their fear of heights and fear of falling. They also show techniques for using the equipment. With our teachers and your (8) _a_, you will reach your (9) _c_ on our ice walls!

1.	a. today's	b. hazardous	c. summer
2.	a. struggle	b. pain	c. endurance
3.	a. peak	b. non-traditional	c. boundary
4.	a. limit	b. height	c. in control
5.	a. expensive	b. unbelievable	c. outgoing
6.	a. events	b. parties	c. sports
7.	a. observe	b. overcome	c. achieve
8.	a. determination	b. money	c. friends
9.	a. role model	b. opponent	c. peak performance



2 Read the text. Choose the best word to fill each blank.

collaborate	**crisis**	**crowdsourced**	**data**	**empowering**	**generate**
measure	**monitor**	**network**	**process**	**scale**	**uploaded**

The Zooniverse is the world's largest online collection of people-powered science projects. Hundreds of thousands of people around the world (1) _collaborate_ with professional researchers. These digital volunteers help manage large amounts of (2) _data_ which would be too much for researchers to (3) _process_ alone. In one project, volunteers watched videos from 50 cameras focused on nesting penguins. They had to (4) _monitor_ and record the birth of each chick.

Zooniverse has collaborated in many times of (5) _crisis_, such as an earthquake. In Nepal, in 2015, they (6) _crowdsourced_ the mapping of the disaster area by analysing thousands of images (7) _uploaded_ from people's mobile phones. The images helped relief organisations understand the (8) _scale_ of the disaster and where help was needed.

Teachers use Zooniverse projects to (9) _generate_ students' interest. Everyone can play a part in this (10) _network_ of digital humanitarians. It can be a very (11) _empowering_ experience.

3 Complete the second sentence so that it has a meaning similar to the first sentence.

1. What would life be like on Mars?
   I wonder _what life would be like on Mars_.
2. Please put on a helmet when you go skiing.
   She's asking us _to put on a helmet when we go skiing_.
3. Can you upload the photos when you have looked at them?
   He is telling them to _upload the photos when they have looked at them_.
4. I don't like extreme sports. You always need a lot of equipment.
   What I don't like _is extreme sports because you need a lot of equipment_.
5. I really want to be a digital humanitarian so I can help others.
   The reason I _want to be a digital humanitarian is to help others_.

4 Read the blog entry. Tick (✓) the correct statements.

Saturday, 19th May

Tomorrow I will be revisiting my childhood. I will be looking through clothes and toys from when I was a child. By this time next week, we'll have moved to a new city and to a new house. My parents think that this is a good reason to throw things out and clean up. Most things I don't use anymore. For example, I still have my first pair of school shoes, which I haven't worn for ten years!

I will try to get rid of at least 60 per cent of what I have. Many toys are old and broken. But, I think, a third of them will be OK to donate to a children's charity. Then there are my old books. The majority of the books are in good condition. They all hold many happy memories and hopefully they will make other children happy, too.

1. The reason for cleaning up is for charity. ☐
2. By next Sunday, the family will have moved into their new house. ☑
3. She doesn't use the majority of toys and clothes. ☑
4. She will get rid of more than half of her childhood things. ☑
5. A lot of toys are old and broken. ☑
6. She will give 50 per cent of her toys to charity. ☐

Unit 3
Food Matters

1 Match each picture to the correct sentence. Write the number on the line.









_2_ a. Some crops are still **harvested** by hand.

_6_ b. **Packaged** food can be **convenient** but the plastic is harmful to the environment.

_7_ c. Some fast food can be too salty for my **taste**.

_1_ d. A **main course** is your main meal at a restaurant.

_5_ e. You know you are eating **wholesome** food when it is straight from your garden!

_3_ f. Transporting food across the globe has an **impact** on the environment.

_8_ g. The fruit at the **local** market was **diverse** and interesting.

_4_ h. **Commercial** fishing is affecting fish stocks.

2 Fill in the blanks with words from Activity 1.

1. French fries and fried chicken don't look very _wholesome_ to me. Let's order a chicken salad instead!
2. The tray of fresh chicken was _packaged_ so tightly, I had to use scissors to open it.
3. The range of products they sell is very _diverse_. They sell clothes, toys and food!
4. Wheat is _harvested_ between August and September with big machines.
5. Try the _local_ river trout. It's caught less than eight kilometres away and it's delicious.
6. Farmlands in North America grow _commercial_ crops, such as wheat, to sell globally.
7. Eating locally grown foods can have a positive _impact_ on the environment.
8. I love spicy food. What _taste_ do you have in food?

3 Listen. Then complete the sentences. VOD

1. His taste in food is _simple and wholesome_.
2. He used to help his dad _harvest tomatoes and beans / dig up potatoes_.
3. He buys at the local supermarket because _it's close and more convenient_.
4. The local supermarket sells _spices and exotic fruits_.
5. One advantage of globalisation is that he can _buy food from different countries_.
6. The lamb from New Zealand is _packaged_.
7. Transporting foods from far away has an _impact on the environment_.
8. _Kiefaction_ can help us make the environment better.

GRAMMAR

Mixed conditionals: Describing an imagined event in the past and a present result

If we **had managed** our food sources better, fewer people **would go** hungry today.
If Christopher Columbus **hadn't travelled** to the Americas, I **wouldn't be eating** potatoes right now!
If he **had added** spices, **would the fish taste** better?
If you **hadn't eaten** so much ice cream, you **might feel** better right now.

The sentence 'If I had time, I would cook a healthy dinner' expresses an unreal situation in the present. Both parts of the sentence refer to the present.

The sentence 'If I had had time, I would have cooked a healthy dinner' expresses an unreal or imaginary situation in the past. Both parts of the sentence refer to the past. In the mixed conditional sentences in this unit, we contrast an imagined event in the past (using the past perfect) with a present result (using would, might or could).

***If* + past perfect, *would (might, could)* + verb (infinitive without *to*)**

1 Read. Then circle the best explanation.

1. If they had ordered wholesome food, they would feel healthier.
   a. They didn't order wholesome food and now they don't feel very healthy.
   b. They ordered wholesome food and now they feel healthy.
2. If Christopher Columbus hadn't travelled to the Americas, I wouldn't be harvesting potatoes in my garden now!
   a. He travelled to the Americas and now I am not growing potatoes.
   b. He travelled to the Americas and now I'm growing potatoes.
3. The fish would taste better if he had added spices.
   a. He didn't add spices and the fish doesn't taste very good.
   b. He didn't add spices and the fish didn't taste very good.
4. They would know that food packaging is bad for the environment if they had read the article.
   a. They read the article and know that food packaging is bad for the environment.
   b. They didn't read the article and don't know that food packaging is bad for the environment.

2 Listen. Then complete the sentences. V 011



1. If the runner hadn't followed a protein diet, he wouldn't be feeling so healthy and strong now.
2. If my friend had been more grateful, I would help her again.
3. If the cook hadn't lost the recipe, the meal wouldn't taste so spicy.
4. If we hadn't had so many revolutionary people throughout history, the world would be a different place today.

3 Read. Write a mixed conditional sentence.

1. I didn't follow the recipe. The main course is a disaster.
   If I had followed the recipe, the main course would not be a disaster.
2. Columbus brought back new and interesting food. Our food today is more diverse.
   If Columbus hadn't brought back new and interesting food, our food today wouldn't be so diverse.
3. I moved to India last year. My taste in food is different now.
   If I hadn't moved to India, my taste in food wouldn't be different now.
4. The farmers didn't have a good harvest. The weather conditions were terrible.
   If the weather conditions had been better, the farmers would have a good harvest.
5. Julia Child wrote a recipe book. I now cook French food all the time.
   If Julia Child hadn't written a recipe book, I wouldn't cook French food all the time now.

4 Write. What would be the present result of these situations for you? Possible answers

1. If I had heard the news yesterday,
   I would know that our oceans are being overfished.
2. If I had reflected more on the snacks I eat,
   I would buy snacks with less packaging.
3. If I hadn't ignored my parents' advice,
   I would be doing homework right now.

1 Listen and read. As you read the article, think about how it relates to the unit. V 012



FOOD FROM THE ROOFTOPS

Caleb Harper isn't the only person researching new ways to bring farms into cities. A new company in California has developed a system of farming that uses Growbots. Growbots are greenhouses specially designed for city rooftops. What are the benefits of Growbots? Well, one benefit is that they fit into any type of space and are lighter than traditional greenhouses. The greenhouses are also hydroponic, which means that the plants don't grow in soil but in nutrient-rich water. People who use Growbots look after the plants by using cloud technology, which can track and control conditions such as irrigation (or water levels), humidity and plant nutrition.

Many people who live in cities are already urban farmers. They grow vegetables in community or neighbourhood gardens. This traditional type of farming takes time, though. It produces fewer vegetables and is very dependent on weather conditions. In addition, studies have shown that urban farming is affected by soil conditions and air pollution. However, because the Growbot system contains its plants in the greenhouses and uses recycled water, the plants are more protected and the food is safer.

It's unlikely that rooftop agriculture will replace conventional agriculture. Growbots aren't good for root crops, such as potatoes. However, they offer an excellent alternative for growing large amounts of lettuce and tomatoes. This would free up farmlands for other crops. Using Growbots would also cut down transportation costs and the negative impact on the environment. Now these vegetables would be grown and bought locally in urban areas.

Vertical farming and Growbots are the results of creative thinking. These new methods try to manage our food resources for future generations. It could be some time before we see Growbots on rooftops in every city. But when we do, we'll know where our food is coming from!



2 Read. Tick **T** for *True* or **F** for *False*. Rewrite any false sentences as true.

	T	F
1. The Growbot farmer needs to check on the greenhouse every day.	☐	☑
2. Technology plays a part in caring for the Growbot plants.	☑	☐
3. Urban farming is not a new idea.	☑	☐
4. Growbot vegetables aren't affected by air pollution.	☑	☐
5. One of the problems of using the Growbot system is getting soil to the rooftops.	☐	☑
6. Growbots aren't heavy and can be moved easily around a rooftop.	☑	☐
7. Using the Growbot system would be more beneficial to the environment.	☑	☐
8. We will be able to buy Growbot vegetables very soon.	☐	☑

Plants are checked and cared for through cloud technology.

The greenhouses are hydroponic, which means they don't need soil.

It could be some time before we see vegetables growing in Growbots on rooftops.

3 Compare and contrast Growbot urban farming with more traditional urban farming.

Growbot Urban Farming	Traditional Urban Farming
greenhouses on rooftops lighter and easier to use; plants easy to care for through cloud technology; plants not affected by air pollution so they are safe; plants not affected by weather; not ideal for root vegetables, such as potatoes; Transportation costs are low and more beneficial than vegetables grown further away.	greenhouses heavier and don't use space well ; plants need personal care and watering; Plants need more time; plants affected by soil and air pollution; plants affected by weather; urban gardens and plots are better for root crops; Transportation costs are also low and more beneficial than vegetables grown further away.

4 Write. Using what you learnt about vertical farming and Growbots, write at least three sentences that describe why new methods of urban farming are important. Possible answers

In the future, we will need more farmland to produce more food. Vertical farming and Growbots need little space, so more farmland could be used for root and cereal crops.

These new methods also mean that vegetables can be grown all year round because they aren't affected by weather. The crops are healthier, because no chemicals or pesticides are used.

GRAMMAR

Double comparatives: Describing outcomes

The more vertical farming we do, **the more** food we will be able to produce.	
The more we think about our choices, **the better** our decisions will be about the food we eat.	
The less packaging we use, **the fewer** problems we cause for the environment.	
The fresher the vegetables, **the healthier** they are for you.	

We use **the ... the** with two comparatives to show that one thing depends on another. The first part of the comparison expresses a condition and the second part expresses an outcome or result.

The word order in each part of the comparison is: **the** + comparative expression + subject + verb. However, the subject and verb are not necessary if they are clear from the context: *Check the expiry date on the milk you get! The fresher, the better. (The fresher it is, the better it is.)*

1 Match the sentence parts. Write the letter on the line.

b	1. The more spices you use,	a. the faster we can take action.
c	2. The more chemicals we use,	b. the better the food will taste.
e	3. The more recipes I read,	c. the greater the threat to the environment.
d	4. The fresher the ingredients,	d. the healthier we will all be.
a	5. The sooner we have the details,	e. the more I cook!

2 Listen. Then write a double comparative sentence with *the ... the.* 1.01 Possible answers

1. Yes, the more organic food we eat, the better it is for us.
2. Yes, the more she travelled, the more types of food she tasted.
3. That's right. The more vegetables farmers grow locally, the faster they get to the market.
4. I agree. The more local food we buy, the more creatively we will cook.
5. I know. The fewer chemicals indoor farmers use, the better it is for the environment.
6. It's true. The more urban farms there are, the fresher the food will be in the cities.

3 Read the email. Then give advice by completing the sentences.

Hi Mum and Dad,

Well, I've just finished my first week at summer camp. At first, it was a little scary not knowing anybody, but I've made some friends, so I'm not feeling so lonely.

The food, however, is another story. I haven't been eating very much because I don't like the food. It isn't really my taste. I bought some fruit at the local shop but it doesn't seem very fresh! I want to eat well. I know it's important, but some of my friends here seem to buy a lot of snacks rather than fruit or vegetables.

Next week, we all need to cook a dish from our country or region. I'm going to cook Mum's famous curry recipe, with lots of vegetables and other spices. But I'm a little nervous about making it. I'm not sure how long I need to cook it. Let me know! Also, I'm not sure if I can get all the spices and ingredients here.

I'm not very organised at the moment and I'm finding it hard to study. The teachers are nice, though. I'm learning a lot of English!

Anyway, I'll call you over the weekend.

Bye for now.

Amaya

Possible answers

1. You know, the longer you are there, the more friends you'll make.
2. The more food you try, the more you'll like it.
3. Yes, the fresher the fruit, the healthier it is for you.
4. Don't be nervous about cooking with curry. The longer you cook the curry, the better it will taste.
5. Remember, the more organised you are, the easier it will be to study.

WRITING

When you write a review, you describe and evaluate something. We usually review restaurants, hotels, books, films and songs to inform others. In your review, you can combine facts and opinions.

Remember to use the following phrases to show your attitude:

- actually
- honestly
- more / most importantly
- (un)fortunately
- clearly
- in my opinion
- obviously

1 Organise.

1. Your task is to *write a review of your favourite restaurant.* You need to include both facts and opinions about the food, the service and the surroundings.

   Complete the table with facts and opinions about the different categories.

	Facts	Opinions
Food		
Service		
Surroundings		

2. Plan your writing. Your first line should immediately convince your reader to read and find out more about the restaurant. Write your opening statement here:

Write a paragraph about each of the three areas in your table. Support your descriptions with facts and opinions.

Finally, you need a concluding paragraph. Remind your readers why they should visit the restaurant.

2 Write.

1. Go to page 55 in your book. Re-read the model and writing prompt.
2. Write your first draft. Check for organisation, content, punctuation, capitalisation and spelling.
3. Check your final draft. Share it with your teacher and classmates.

Now I can ...



- **talk about food sustainability.** Possible answers ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Explain why it's good to buy food locally.

  It's good to buy locally because we try different types of food that are in season.

  Give two reasons why vertical farming is a good idea.

  Vertical farming can save space and food can be grown all year round.

  Do you think that one day we will all be eating the same food? Why? / Why not?

  No. I think people's tastes always will be different.

- **use mixed conditionals to express how things would be different.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  If I had read (read) the review, I wouldn't be eating at this restaurant right now.

  If I had eaten (eat) healthier food, I wouldn't be at home feeling ill.

- **use double comparatives to describe outcomes.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  The more local vegetables we buy, the less transporting they need.

  The tastier the food, the more I want to eat it.

  The less I eat, the hungrier I become.

- **write a review of my favourite restaurant.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Write four or five sentences using the phrases from the box.

  honestly · more importantly · obviously · (un)fortunately

  Possible answer: Casa di Mamma is a great Italian restaurant. The waiters are all very friendly. They obviously love their jobs! More importantly, the food is tasty and made with the freshest of ingredients. Unfortunately, Casa Di Mamma is open only at weekends, so make sure you book a table well in advance.

YOU DECIDE **Choose an activity.** Go to page 92.

Unit 4

The Footprint of Fun

1 Find twelve vocabulary words in the word search. Words run in any direction. The first one is done for you.



P	N	A	T	I	N	D	U	S	T	R	Y		
E	X	C	E	S	S	I	V	E	L	F	T		
C	H	C	I	L	O	R	F	V	S	A	I		
O	N	E	U	R	E	T	T	I	L	K	L		
N	T	S	O	F	M	D	C	H	C	T	I		
O	D	S	D	X	A	K	T	C	O	I	C		
M	L	I	C	T	U	I	O	A	N	C	A		
I	Z	B	V	I	F	W	B	O	S	I	F		
C	R	L	O	E	U	N	L	R	U	F	V		
F	I	E	N	Y	R	H	G	F	M	A	Q		
T	N	E	M	E	S	U	M	A	E	T	Y		
W	B	G	E	N	S	I	T	I	V	E	J		

2 Write. Complete the sentences with words from the word search. Make changes as needed.

1. Thousands of tonnes of _litter_ are produced at _amusement_ parks.
2. _Excessive_ amounts of water are wasted.
3. Rides _consume_ a lot of energy.
4. _Compost_ bins are important for biodegradable material.
5. Parks are _accessible_ through two or three main gates.
6. Changes could have _economic_ and environmental _benefits_.
7. All parks have bathroom _facilities_, cafés and shops.
8. The bright lights and noise can hurt _sensitive_ eyes and ears.
9. The entertainment _industry_ is trying to be greener.

3 Match the sentences. Then underline the words with the same meaning but different form.

_e_ 1. The demand for water exceeded the organiser's expectations.
_g_ 2. Some amusement parks can be an attack on the senses.
_c_ 3. My city has an industrial area with many factories.
_h_ 4. The children enjoyed going to the amusement park.
_f_ 5. World economies need to spend more money on clean energy.
_a_ 6. The famous singer is participating in a charity concert.
_d_ 7. There was no wheelchair access at the front gate.
_b_ 8. It's important to conserve areas of natural beauty.

a. His participation has been very welcome.
b. Wildlife conservation is also essential.
c. Locals want industries to improve their ecological footprint.
d. The stadium was only accessible for wheelchairs at the side gate.
e. What is more, the number of bottles left on the ground was excessive.
f. That would have great economic and environmental benefits.
g. If you have sensitive hearing or don't like flashing lights, it can be too much!
h. They amused themselves enormously.



4 Listen. Number the topics in the order you hear them. Then listen again and fill in the blanks with the missing vocabulary words. Finally, write a sentence about each topic. V.094–095

_2_ a. _proactive_ in keeping areas clean
_0_ b. _excessive_ meal
_5_ c. the green _movement_
_4_ d. _economic_ crisis
_1_ e. sports _facilities_
_3_ f. _non-profit_ organisations

People were proactive and placed litter bins in parks.
Answers will vary.

GRAMMAR

Passives: Describing actions and processes

We should recycle more than one in five plastic bottles.	More than one in five plastic bottles **should be recycled.**
The world population will have consumed more than 44 billion gallons of bottled water before the end of the year.	More than 44 billion gallons of water **will have been consumed** by the world's population before the end of the year.
Water companies have sold bottled water at 10,000 times the price of tap water.	Bottled water **has been sold** at 10,000 times the price of tap water.
Hopefully, other musicians will follow Jack's example.	Hopefully, Jack's example **will be followed** by other musicians.

When we use the passive voice, we focus on the action performed, not on the person performing it. The person who performs the action is not important, or is not known. We use *by* to say who did the action.

Use the passive with different verb tenses and with all modals. It always includes a form of **be** + *past participle*.

The passive is more common in formal writing and less frequent in conversation.

5 Write. Change the active sentences to passive. Use the correct tense.

1. The green movement has criticised the public for leaving rubbish on the beach.
   People _have been criticised for leaving rubbish on the beach_.
2. Starting from next week, supermarkets will charge customers for plastic bags.
   Customers _will be charged for plastic bags starting from next week_.
3. Experts are investigating the harmful chemicals in plastic bottles.
   The harmful chemicals in plastic bottles _are being investigated_.
4. People have recently found a dead whale full of plastic bottles and bags.
   A dead whale _has been found full of plastic bottles and bags_.
5. Some bottled-water companies will have made huge profits by the end of the year.
   Huge profits _will have been made by some bottled-water companies_.
6. People should use cloth bags at their local supermarket.
   Cloth bags _should be used at local supermarkets_.

6 Listen. Fill in the blanks with the correct passive form of the verb in brackets. Then listen again and complete each sentence with a suitable vocabulary word. V.096

1. An expert _was invited_ (invite) to talk about _reducing_ the school's ecological footprint.
2. _Results_ of the school's 'green movement' _can be seen_ (see) all over the school.
3. Posters _have been put up_ (put up) to make students _sensitive_ to the important issues.
4. The posters explain what _harm_ _has been caused_ (cause) to the environment.
5. Paper _waste_ _is collected_ (collect) by volunteers to reuse in art projects.
6. Biodegradable waste _is taken_ (take) to _composting_ bins.
7. _Litter_ _can be collected_ (collect) from the new litter bins around the playground.
8. Water fountains _have been demanded_ (demand) to make water more _accessible_.
9. Too much water _is consumed_ (consume) from plastic bottles, which are so _damaging_ to the environment.
10. Although at first the school board thought that more water fountains were _excessive_, now they _will be installed_ (install) next year.



7 Write. Choose a word from Group A and another from Group B. Write sentences using the passive. Use different verb tenses. Use vocabulary from the unit. Possible answers

A:	wildlife	rain water	tourist	electricity	facilities	amusement park
B:	recycle	harm	make	attract	build	generate

Wildlife can be harmed by using too much plastic.
Rain water is being recycled at Disneyland.
Millions of tourists are attracted to amusement parks each year.
Electricity can be generated by windmills.
Facilities must be made accessible for everybody.
A new tourist attraction will be built by the city.

1 Listen and read. As you read, find and underline the advantages and benefits of riding a bicycle regularly. SB p117



BIKES LEAVE NO FOOTPRINTS

1 When we think of bicycles we think of fun and the outdoors. Bicycles give riders the freedom to explore and enjoy the environment and its surroundings. They are a healthy, cheap activity and good exercise.

2 Most people know that this form of entertainment is ecologically friendly. Regular use of a bicycle has very low impact on the environment. If you are riding a bike, you are helping to reduce air and noise pollution.

3 In cities across the world, bikes are becoming more and more popular. In fact, they are becoming more than just a fun pastime. People ride bicycles to avoid traffic jams on their way to work, school or shopping. For many people around the world, access to markets and schools would not be accessible without a bike.

4 Cities are taking this enthusiasm and demand for bicycles seriously. Some cities, such as Paris and Barcelona, have not only built bicycle lanes but have also introduced a system of renting bikes. You can rent, or use, a bicycle in one area of the city and drop it off at a bike station in another area of the city. Paris now has thousands of bikes for public use, with bicycle stations located throughout the city.

5 Some South American cities, such as Bogotá in Colombia, have a weekly car-free day. More than 2 million people cycle, skate or jog along the 122 km. (76 miles) of closed roads. On these days, the traffic-related air pollution from old buses and lorries is greatly reduced.

6 It seems that the bike is a force for good, providing solutions for cleaner cities without leaving a serious ecological footprint.



2 Match each paragraph with a heading. Write the number.

2 a. Bicycles don't pollute.
5 b. Bicycles also bring people together.
4 c. Cities are being proactive.
1 d. Bicycles are fun and good for us.
3 e. People use bikes for work as well as for fun.



3 List the benefits of riding a bicycle mentioned in the text. Now think of reasons a bike might not be popular. Make your own idea web and list them.



4 Write. Is riding a bicycle popular where you live? Why or why not?

Possible answer: The area where I live is very hilly. It is mainly cyclists who have a passion for cycling and they have very good bikes that go up and down the hills.
My town is very small and most people can walk from one end of it to the other.
There are no cycle lanes. Young children can cycle in the park in the centre of town.

GRAMMAR

Verbs followed by gerunds and infinitives

Verb + infinitive	Verb + gerund
She **promised to take** them to the water park.	We **enjoyed visiting** the Olympic Park.
Verb + infinitive or gerund (similar meaning)	
I **like to go** to water parks.	I **like going** to water parks.
Verb + infinitive or gerund (different meaning)	
He **remembered to go** to the park.	He **remembered going** to the park as a kid.

To remember which verbs are followed by an infinitive and which are followed by a gerund, learn them as a unit. Don't try to remember just the verb *promise*. Learn it as *promise something* or *promise to do something*. You can also use the list on page 152 in your book.

Remember that some verbs, such as *forget*, *remember* and *stop*, can be followed by a gerund or an infinitive, but with a difference in meaning.

1 Complete the sentences. Use the gerund or infinitive of the verb in brackets.

1. The swimmers invited me _to use_ the Olympic pool. (use)
2. The girl stopped _to refill_ her bottle at the water fountain. (refill)
3. The fans stopped _driving_ to the concerts. (drive)
4. They are thinking of _renting_ bicycles on their next holiday. (rent)
5. Don't forget _to put_ the bottles in the recycling bins. (put)

2 Listen. Finish the sentences using an infinitive or a gerund. SB p118

1. She decided _to collect rainwater to wash her car_.
2. Next time he'll avoid _going to that beach_.
3. Don't forget _to join the green movement_.
4. The local government has promised _to build more bicycle lanes_.
5. Plastic waste is threatening _to destroy marine life_.
6. Water parks choose _to use special water filters in their parks_.

3 Read Karina's blog. Underline the verbs and the gerunds or infinitives that follow them. Answer the questions using the verbs you underlined.

I had always wanted to visit the site of the 1992 Olympics in Barcelona. I like doing sports, so I will never forget visiting this Olympic venue. I loved walking in the footsteps of great athletes. It's wonderful that all the facilities have been maintained. I enjoyed seeing the views of the city from the top of the hill. When the Olympic organisers decided to build the stadium in this location, above the city, they knew what they were doing. The views are spectacular!



Barcelona planned to use all its venues after the Olympics. Although now not many locals seem to go to the stadium (you don't need to pay to visit), people go to see concerts and shows in the stadium. Next to the stadium, there's a museum that my brother wanted to see because of the interactive exhibits. However, it was a beautiful day, so he chose to swim in the pool with me. It's not every day that you can swim in a 50-metre pool where Olympic swimmers won their gold medals. I definitely suggest visiting and going for a swim. Remember to take your swimming costume!

1. What had Karina always wanted to do?
   She had always wanted to visit the site of the 1992 Barcelona Olympics.
2. What did she love doing at the Olympic Stadium?
   She loved walking in the footsteps of great athletes.
3. What did she enjoy seeing?
   She enjoyed seeing views of the city.
4. Why did Olympic organisers 'know what they were doing'?
   because they decided to build the Olympic stadium on a hill above the city
5. What did Karina's brother want to do? What did he choose to do instead?
   He wanted to visit the museum. He chose to swim.
6. What should you remember to take with you if you visit?
   You should remember to take a swimming costume.
7. Why do you think she will 'never forget visiting' this place?
   She will never forget visiting this place because she loved the experience of walking in other athletes' footsteps and swimming in an Olympic pool where Olympic swimmers have swum. It had always been her dream.

WRITING

When writing about a problem and possible solutions, we can use certain expressions.

• Problem:	due to	It's true that	the fact is	the problem / issue is
• Solution:	another possibility	in order to	one solution is	will result in

1 Organise.

1. Your task is to *write an essay about an activity you enjoy, but that may be harmful to the environment*. You must describe why it is a problem and give three possible solutions.

   Use the idea web to help you plan. Write the activity you enjoy in the first box. In the box below, make notes why the activity is harmful to the environment. Write three possible solutions, one in each of the three boxes along the bottom.

Possible answer



2. Plan your writing. You'll need an introductory paragraph with a topic sentence. The topic sentence, in this case, should state the activity you enjoy. Begin your second sentence with 'However,' and state why you think the activity is harmful to the environment. Write your topic sentence and second sentence here:

   _____

   _____

   Then, describe in more detail how this activity is harmful.

3. You will need one or two paragraphs describing your solutions for this problem. Make sure you support your ideas with facts.

   Finally, in your concluding paragraph, give your opinion on how likely it is that one of these solutions will be adopted.

2 Write.

1. Go to page 71 in your book. Re-read the model and writing prompt.
2. Write your first draft. Check for organisation, content, punctuation, capitalisation and spelling.
3. Check your final draft. Share it with your teacher and classmates.

Now I can ...



- **talk about the environmental impact of entertainment.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

What form of entertainment has the greatest negative impact on the environment? Why? Possible answers

Amusement parks have the greatest impact because they use excessive amounts of electricity. They produce tonnes of litter.

What environmental impact has surprised you the most?

Amusement parks have surprised me the most because I have never really reflected on their negative impact.

- **use passives to describe actions and processes.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Use passives to answer these questions. Possible answers

What environmental steps are taken by Jack Johnson at his concerts?

Fans are encouraged to bring their own water bottles to refill at the concert. Food at the concerts is bought from local farmers. Biofuel is used in concert tour buses.

What can you do personally to make a positive impact on the environment?

My water bottle can be refilled with tap water. My plastic bags can be re-used. My litter will be thrown in litter bins.

- **use gerunds and infinitives after verbs.** Possible answers ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

I enjoy ice skating in winter.

She promised to study more often.

- **write an essay about a fun activity that may be harmful to the environment.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Choose an activity that you think is harmful to the environment and needs to be changed.

The issue is Answers will vary.

One solution is _____.

YOU DECIDE **Choose an activity.** Go to page 93.

Units 3–4 Review

1 Read. Complete the sentences with the correct word from the box.



commercial	**consistent**	**diverse**	**harvested**	**impact**
main courses	**reflection**	**sustainable**	**vertical**	**wholesome**

On the 3,000 m. (9,800 ft.) (1) vertical slopes of the Andes mountains, a (2) diverse variety of potatoes is grown. Some are purple, some are orange, but all are (3) harvested at this high altitude.

Potato farming here is (4) consistent with Andean culture of thousands of years ago. It's seen as a (5) sustainable way of life. Recently, however, Andean farmers were pressured to grow (6) commercial varieties of potato to earn more money.

Scientists, economists and historians are taking a proactive role and are creating seed banks to prevent these Andean potato varieties from disappearing. Top chefs from around the world are also interested in the potatoes. They are creating their next tasty (7) main courses with the unique shapes, textures and colours of the Andean potato.

More importantly, environmentalists believe that the Andean potato, with its high levels of different vitamins, can contribute to decreasing malnutrition worldwide. Let's hope these (8) wholesome potatoes can make the (9) impact they need to survive.

2 Read. Use the word in capitals on the right to form a word that fits in the blank space.

Is Formula 1 racing a form of excessive (1) amusement ?	AMUSE
We took a closer look to find out and discovered the following. It's the actual production of the cars that harms the environment. Formula 1 racing is (2) sensitive about its environmental footprint.	SENSE
Over the years, Formula 1 has shared its knowledge on reducing fuel use and on improving engines. This has (3) beneficial both the environment and the car (4) industry . It has also contributed to future car (5) development , the improvement of electric cars, and hybrid buses and cars.	BENEFIT INDUSTRIAL DEVELOP
Formula 1 takes its responsibility seriously and is making (6) revolutionary changes in many different areas. These developments bring social and (7) economic advantages for individual car owners, too.	REVOLUTION ECONOMY
Maybe Formula 1 isn't as (8) harmful as we first thought.	HARM

3 Listen. Circle the correct ending to each sentence. 2.19

1. The more documentaries she watches about insects and their protein,
   (a.) the more she wants to eat them. b. the more documentaries she wants to watch.
2. If he had ordered a larger dish of insects, he's sure
   (a.) she wouldn't have the same attitude. b. she would want more.
3. The bigger the dish of insects,
   a. the tastier they are. (b.) the less tasty they appear.
4. If she hadn't travelled to so many exotic places,
   a. she would have a taste for exotic food. (b.) she wouldn't have a taste for exotic food.
5. The more she reads about over-fishing,
   (a.) the more careful she wants to be choosing fish to eat. b. the less fish she eats.
6. The better choices we make,
   (a.) the healthier our oceans will be. b. the healthier we will be.
7. If she had known cacao came from the Americas,
   (a.) she would still be there now. b. she would fly back every year.
8. If he had travelled as much as his friend,
   a. perhaps he would love travelling more. (b.) perhaps he would like spicy food.

4 Complete the sentences with the correct form of the verb in brackets. Use the passive, an infinitive or a gerund.

1. Potatoes are grown (grow) by farmers at 3,000 m. (9,800 ft.) in the Andes.
2. Scientists decided to create (create) a seed bank for Andean potatoes.
3. We encourage people to taste (taste) the Andean potato chip.
4. My mum remembered going (go) to her first concert in her twenties.
5. We remembered to reserve (reserve) the tickets online. It's cheaper!
6. I'm considering buying (buy) an electric car!
7. We mustn't stop trying (try) to reduce our plastic footprint.
8. A positive impact will be produced (produce) if they work together.
9. In the future, I will avoid eating (eat) over-fished species.
10. Car engines have been improved (improve) by Formula 1 mechanics over the years.

Unit 5

Why We Explore



1 Circle the word that is a different part of speech from the others. Then use that word in a sentence.

1. pioneer / high-tech / knowledge
   Explorers use many high-tech tools.
2. investigate / research / curious
   Explorers are often curious about the world around them.
3. purpose / prepare / require
   The purpose of going to school is to learn.
4. curious / pioneer / remote
   Sylvia Earle is a pioneer in ocean exploration.
5. achievement / investigate / expert
   Explorers sometimes investigate remote locations.

2 Use a word from Activity 1 to replace each underlined word or phrase. Make changes to the word where necessary.

1. I am interested to see the views from the hilltop. curious
2. The village is too far away. It will take days to reach. remote
3. I want to be the first person who travels beyond Mars! pioneer
4. She is a skilful researcher. an expert
5. His camera has very sophisticated and modern technology. high-tech
6. I want to go and find out what's in that cave. investigate

3 Listen. Tick **T** for *True* or **F** for *False*. Re-write any false statements as true. T 0.01

	T	F
1. Sylvia has explored deep and remote parts of the ocean.	☑	☐
2. Research into the behaviour of tropical fish has been her only achievement.	☐	☑
3. The purpose of building underwater vehicles was to allow scientists to travel easily between Pacific islands.	☐	☑
4. High-tech equipment can help stop illegal fishing.	☑	☐
5. She feels that the oceans require our immediate attention.	☑	☐

Possible answers

2. Sylvia has many achievements. One is to protect our oceans and educate people about their importance.

5. The purpose of building underwater vehicles was to investigate the depths of the ocean.

4 Listen again and write three of Sylvia Earle's achievements. Then answer the question about yourself. T 0.01 Possible answers

1. She has led many expeditions worldwide.
2. Created hope spots to protect marine life.
3. Raised funds to help the Galápagos Islands.

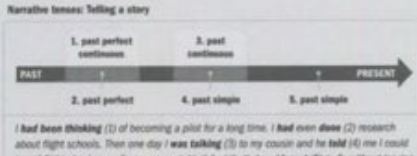
What has been your greatest achievement so far? Possible answers

My greatest achievement so far: I ran half a marathon for a charity.

I got second place in a writing competition. I learnt to play a musical instrument.

GRAMMAR

Narrative tenses: Telling a story



*I **had been thinking** (1) of becoming a pilot for a long time. I **had** even **done** (2) research about flight schools. Then one day I **was talking** (3) to my cousin and he **told** (4) me I could install flight simulator software on my tablet! And that's how I **learnt** (5) to fly without leaving my house!*

We can use four tenses when narrating stories:
- the past simple (4, 5) for narrating events in chronological order.
- the past perfect (2) for describing an event that happened before another event in the past.
- the past perfect continuous (1) and the past continuous (3) to describe actions in progress or actions that are repeated over a longer period.

1 Read. Fill in the blanks with the correct tense for each verb. The numbers refer to the timeline shown above.

1. Lee Berger had been digging (1, dig) for fossils for 17 years when he realised (4, realise) he was looking in the wrong place.
2. In 2008, he went (4, go) back to South Africa and took (4, take) a new route to a place 17 km. (10 miles) away from where he had been digging (1, dig) originally.
3. As he was walking (3, walk) around, looking for clues with his nine-year-old son, he discovered (4, discover) an area with 125 new cave sites and 14 fossil caves.
4. By the end of 2009, he had found (2, find) 700 more caves.



2 Listen. Fill in the blanks with a synonym from the box. T 0.02

drive	encounter	engaged in	exciting
globe	remote	route	set a record



Tracey Curtis-Taylor had been dreaming about flying since she was a young girl. Her (1) drive for adventure started then, too. She had had her first (2) encounter with flying at the age of 16. When she was living in South Africa, and had been working there for many months, she realised that she wanted to follow her dream of flying. In 2013, she flew for about 16,000 km. (10,000 miles) in an old aeroplane over (3) remote parts of Africa by herself. In 2015, she began another solo flight, following the (4) route of pioneer Amy Johnson, who in 1930 (5) set a record for being the first female to fly solo between London and Sydney. The route took Tracey halfway around the (6) globe and it was her most (7) exciting flight as a pilot so far.

3 Fill in the table. Write the underlined verbs from Activity 2 in the correct columns below.

Past simple	Past continuous	Past perfect	Past perfect continuous
realised, flew, began, took	was living	had had	had been dreaming had been working

4 Write. You and a friend had been shipwrecked on a remote island. Answer the questions to explain how you were rescued. In your answers, use at least one of the words in brackets. Possible answers

1. What had you been doing while you waited to be rescued? (investigate, look into, curious)
   We were both curious and had been investigating what was on the other side of the island.
2. What had you done the morning of your rescue that was different from other mornings? (encourage, encountered, set a record)
   The morning of our rescue we encountered a wild animal and set a record for how fast we could both run.
3. What were you doing when you saw the rescue plane? (research, knowledge, route)
   We had been researching an escape route when we saw the rescue plane.
4. What did you do after the pilot landed the plane? (achievement, globe)
   We told the pilot about all our achievements on the island to the pilot and asked him where we were on the globe!

1 Listen and read. As you read, notice the reasons we should keep exploring. 🎧 2.09

Will We Ever Stop Exploring?

Humphry Davy (1778–1829), a famous English chemist, was a pioneer in the field of electrochemistry. He believed that people should never stop exploring. He once said that it would be dangerous for the human mind to think that it knew everything about science and nature and that there were no new worlds to conquer.

Some people think we spend too much time and money on exploration and that we know enough about the universe we live in. But if we didn't keep exploring, we wouldn't find cures for diseases or be able to manage our ocean resources. We wouldn't have knowledge about our past or the reasons for climate change. Without exploration, we wouldn't have the technology we have today, and we wouldn't be looking into the significance of water and life on other planets and moons.



Of course, any exploration involves risks. Even as children, curiosity and the excitement of something being a little dangerous encourages us to look over a neighbour's fence or wonder what would happen if we pressed a button on a machine.

Scientists have been investigating the biological factors that make us explore. They've found that our curiosity and motivation to find and learn new things is driven by a chemical found in our brain. In some people, a high amount of this chemical can increase their level of curiosity.

Fortunately, or unfortunately, not everybody has the same amount of this chemical, which explains why we all aren't ready to zoom into space.

Whether it's curiosity, chemicals or special genes in our DNA passed down from our ancestors – the original risk takers – there are many reasons that encourage us to keep on exploring.

2 Read the article again. Then circle the correct answers.

1. Humphry Davy believed that ____.
   a. there is nothing left to explore
   (b.) we would be wrong to think there is nothing left to explore
2. Some people think that ____.
   (a.) we know enough about the universe
   b. exploration is only about going into space
3. The chemical in our brain is ____.
   a. only associated with children
   (b.) a chemical we all have
4. Curiosity and motivation ____.
   (a.) encourage us to explore
   b. weren't traits our ancestors had

3 Why do people explore? Complete the idea web with reasons you found in your book. Write one idea in each circle. For each reason, think of, or search the Internet for, an example from real life. Write your examples on the lines.



Possible answers

exploration of the Arctic ice melting
banning of certain fishing methods
Lee Berger's discovery of ancient remains
Rover Curiosity searching for water on Mars
discovering causes and cures for cancer

GRAMMAR

Geographic use of *the*

The Nile River runs through **the Sahara Desert** to **the Mediterranean Sea**.
Christopher Columbus was born in **the Republic of Genoa**, Italy. He sailed past **the Canary Islands** and across **the Atlantic Ocean** four times.
The European Union has over 500 million people.
I'm from South America. That's in **the southern hemisphere**.

We use *the* with names of mountain groups, rivers, oceans, seas, deserts, island groups, points on the globe (*the South Pole*) and general areas (*the south, the southern hemisphere*).

We don't use *the* with most countries, cities, streets, individual mountains (*Mount Everest*), islands and continents. Exceptions are place names that contain words such as *republic, state* or *union* (*the Dominican Republic, the United States*). We also say *the Netherlands* and *The Hague*.

1 Write *the* or *X* for *no article*. Then listen to the geography quiz. Circle the correct answer (**a** or **b**) to each question. Listen again and check your answers. 🎧 2.10 🎧 2.11

1. (a.) the Himalayas — b. the Alps
2. a. the Atacama Desert — (b.) the Gobi Desert
3. (a.) X Mt. Fuji — b. X Mt. Kilimanjaro
4. a. X Britain — (b.) the United Kingdom
5. (a.) the Caribbean Sea — b. the Red Sea
6. a. the Yangtze — (b.) the Amazon

2 Read and write. Answer the questions. Answers will vary

1. What continents, seas and/or oceans would you need to cross from your home to visit London?

2. If you had a ticket to visit anywhere in the world, where would you go? Why?

3 Read the postcards. Write *the* or *X* for *no article*. Imagine you have just visited a place you always wanted to explore. Write your own postcard. Name at least four geographical places.

Dear Kiko,

Our cruise on the Mediterranean Sea is going very well. It's so peaceful and calm. So far we've visited X Barcelona and the Balearic Islands. Tomorrow, we will stop at X Naples. We hope to see X Mt. Vesuvius. We've never seen a volcano in real life before! Will send you some photos.

See you soon.

Mum and Dad





Hi Mum and Dad,

How are you? Can't believe I finally made it to the top of Machu Picchu, in X Peru. The view over the Andes Mountains was spectacular! At the end of the week, we are going to travel around X Lake Titicaca. We will fly back from X Chile, but not before camping in the Atacama Desert and walking on the beaches of the Pacific Ocean. This is my dream come true! Sending love from X South America.

Francisco

WRITING

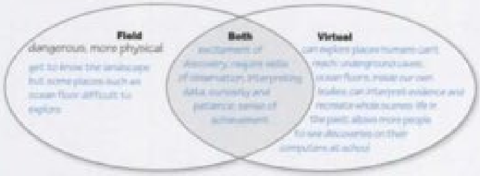
Use the following phrases to compare and contrast how people, things, places or ideas are similar or different.

Compare
- in the same way
- likewise
- similarly
- the same as

Contrast
- by comparison
- in contrast
- on the one hand
- on the other hand
- whereas

1 Organise.

1. Your task is to *compare and contrast exploring in the field with exploring virtually*. Look through Unit 5 in your book and use your own ideas about the two ways of exploring. Make notes on the Venn diagram.



2. Plan your writing. You'll need an introductory paragraph with a topic sentence. Your topic sentence will introduce the two things you are going to compare and contrast. Write your topic sentence here:

____

3. You'll need two to three body paragraphs. Write one paragraph describing how the two forms of exploration are similar and one paragraph describing how they are different.
4. Finally, you'll need a concluding paragraph. It will summarise your main idea and opinion on which type of exploration is best and why.

2 Write.

1. Go to page 89 in your book. Re-read the model and writing prompt.
2. Write your first draft. Check for organisation, content, punctuation, capitalisation and spelling.
3. Write your final draft. Share it with your teacher and classmates.

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Now I can ...



- **talk about why it's important to explore.** Possible answers

  ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  How can space and ocean exploration benefit us? Write a sentence about each.

  Space exploration can help us understand how the universe was formed.

  Ocean exploration may be able to help us manage our ocean resources better.

- **use narrative tenses to tell a story.**

  ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Describe a time (real or imaginary) when you discovered something. Use the four narrative tenses. Possible answer

  I had been walking along the beach looking for a special shell or pebble. My dad had tried to get me to swim, but I wasn't interested. Suddenly, as I was walking, I saw a big, beautiful, red jewel in the sand. I picked it up and screamed. A crab was running up my arm and then fell off my shoulder back onto the sand!

- **use *the* correctly when talking about geographical places.**

  ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Write *the* or *X* for no article.

  1. The Danube starts in X Germany and flows into the Black Sea.
  2. The Russian Federation isn't part of the European Union.

- **write an essay that compares and contrasts exploring in the field and exploring virtually.**

  ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Would you rather work virtually or out in the field when exploring different weather conditions? Write three or four sentences and use the phrases you learnt. Possible answer

  I would prefer to work virtually when exploring weather conditions. It may be too cold, hot or dangerous out in the field if conditions are extreme. The weather conditions might damage the instruments and devices. In the same way, satellites can provide a lot of data and can follow a hurricane more easily.

YOU DECIDE **Choose an activity.** Go to page 94.

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Unit 6

Giants

1 Read the clues. Unscramble the words. Then decode the sentence and decide if it is *True* or *False*.

1. nacietn	a n c i [e] n t (3)	Extremely old
2. ehportsatac	c a t a s t r o p [h] e (8)	A disaster
3. dopleve	d e v e l o [p] (11)	To become more advanced over time
4. meretaid	d i a m e t e [r] (2)	Distance across centre of a circle
5. orensoum	e n o r m [o] u s (9)	Very, very big
6. tepcxenio	e [x] c e p t i o n (4)	Something or someone different from others
7. tiextcn	e x [t] i n c t (1)	No longer exists
8. tfggnniihre	f r i [g] h t e n i n g (10)	Scary
9. terah	h e [a] r t (6)	An organ that pumps blood
10. eghu	h [u] g e (13)	Very big
11. awj	j a [w] (5)	The bones of the face where teeth grow
12. siherprotic	p r e h i s t o r i [c] (14)	Time before recorded history
13. hcamots	[s] t o m a c h (7)	An organ that digests food
14. geihw	w e [i] g h (12)	To calculate how heavy something is

T. R e x (1 2 3 4) w a s (5 6 7) t h e (1 8 3) h u g e s t (8 13 10 3 7 1)
p r e h i s t o r i c (11 2 3 8 12 7 1 9 2 12 14) c r e a t u r e. (14 2 3 6 1 13 2 3)

True or False? False

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2 Listen. Complete the table with information about the blue whale.

Length	29 m (94 ft.) long
Type of eater	carnivore, eats small organisms
Weight	158 metric tonnes (174 tons)
Heart	450 kg (1,000 lbs), size of a small car
Diameter of major blood vessel	so wide a human could crawl through
Jaw	has strong muscles but no teeth
Stomach	can hold 3.6 metric tonnes (1 ton) of krill

3 Write. Complete the information. Use vocabulary words from pages 94–96 of your book.

Today, dinosaurs are alive and well in cinemas. They are shown as (1) gigantic / enormous / frightening creatures attacking ships in the ocean or invading cities ready to cause a (2) catastrophe. They all seem to be meat-eating (3) carnivores with huge (4) jaws and (5) enormous teeth. The film industry has (6) developed dinosaurs into animals with bad reputations.

However, if we look at the blue whale, huger than any dinosaur, we see an animal that causes no harm to humans. Yet, humans have hunted blue whales very close to (7) extinction. Fortunately, there are still between 10,000 and 25,000 blue whales in our oceans today. But are these massive mammals that seem so harmless an (8) exception to the rule that big is bad, or are these (9) prehistoric giants just completely misunderstood?

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GRAMMAR

Relative clauses: Defining and describing

I found a fossil **that** / **which** belonged to a dinosaur.	The fossil, **which** I found in my garden, was a dinosaur tooth.
Palaeontologists are scientists **who** study the forms of life from prehistoric times.	Nizar Ibrahim, **who** loved dinosaurs as a boy, is now a palaeontologist.
The desert **where** Spinosaurus bones were found was once green and tropical.	Spinosaurus, **whose** bones were found in the North African desert, lived on land and in water.

Some relative clauses describe or define the person, thing or place we are talking about. We use *who* or *that* with people, *that* or *which* with things and *where* with places.

Other relative clauses give us extra information about the person, thing or place. This extra information is written between commas. If we leave out this information, the sentence still makes sense. *That* is not used for clauses between commas.

1 Match the extra information from the box with each sentence. Complete the sentences in the box with *who*, *which*, *that*, *where* or *whose*.

a. where many fossils have been found
b. whose eggs were the size of rugby balls
c. which hit the Earth millions of years ago
d. who / that study marine life
e. which is in the city centre

1. A meteor, c, caused a catastrophe.
2. In the museum, e, there are fossils of dinosaur teeth.
3. Scientists d still don't know all the secrets of our oceans.
4. Argentina and Africa, a, were once part of a 'supercontinent' called Pangaea.
5. *Argentinosaurus*, b, was the largest dinosaur to live on Earth.

2 Read and write. First, complete the sentences with a word or phrase from the box. Then, combine the sentences using *that*, *which*, *where*, *who* or *whose*.

era | fierce | preyed on | times

1. Dinosaurs left us clues. They tell us about life in a different era.
   Dinosaurs left us clues that tell us about life in a different era.
2. Some dinosaurs were predators. They preyed on other dinosaurs.
   Some dinosaurs were predators that preyed on other dinosaurs.
3. Nizar Ibrahim is a palaeontologist. He discovered the bones of a dinosaur three times longer than a car.
   Nizar Ibrahim is a palaeontologist who discovered the bones of a dinosaur three times longer than a car.

3 Listen. Underline the clause that is not true in each sentence. Then rewrite the clauses correctly. 2.07

1. Quetzalcoatlus, which lived 70 million years ago, was the largest bird ever.
   was the largest flying reptile ever
2. Scientists have found evidence that this enormous reptile had feathers on its back.
   this enormous reptile had fur on its back
3. Scientists discovered that Quetzalcoatlus's jaws, which were short and wide, did not contain teeth.
   which were long and thin
4. Some scientists, whose studies focused on Quetzalcoatlus's eating habits, believe it preyed on dead crabs.
   it preyed on dead dinosaurs
5. *Pterosaurs*, which was the group Quetzalcoatlus belonged to, were flying dinosaurs.
   were not dinosaurs

1 Listen and read. As you read, think about what you have learnt about dinosaurs. Then underline the new words you studied on pages 100–101 of your book. 2.08

Clues *from the Past*



Alien planets and creatures in films such as *Avatar*, *Star Trek* and *Star Wars* have always fascinated us. We have created these alien worlds in our imaginations. Yet, if these worlds did really exist, it would be very difficult to visit them. Fossils, however, allow us to travel back in time and give us a picture of a real 'alien' world on our own planet. It really was an extraordinary place.

In ancient times, fossils were used for decorative or religious purposes only. However, some believed that these fossils were a sign that mythical creatures, such as dragons, existed.

Palaeontology today, with the advantages of modern technology, gives us a more accurate picture of the planet before humans appeared. Animals, plants, fungi and bacteria have all left behind significant evidence about what life was like in prehistoric times. Palaeontologists can now study the tiniest details of the smallest fossils. X-ray machines, CT scanners and advanced computer programs can analyse fossil data, reconstruct skeletons, and create the bodies and movements of extinct organisms.

But fossils tell us much more. They tell us about eating habits, which animal preyed on others, if there was enough food and how an animal might have died. They tell us about climate. Air bubbles inside ancient trees allow scientists to study the chemistry of the oxygen inside. This can tell them if, for example, there were volcanic eruptions or other changes in the atmosphere at the time.

In palaeontology, no piece of information is useless. Each piece forms a picture of our planet before we even knew it existed. Every new discovery not only creates new mysteries but also adds a deeper understanding of how life developed.

2 Read 'Clues from the Past' again. For each answer, write the question based on the text.

1. What do fossils allow us to do?
   They allow us to travel back in time.
2. Did people know about dinosaurs in ancient times?
   No, some people thought fossils were evidence of mythical creatures.
3. What are the advantages of modern technology?
   One of the advantages is that it gives palaeontologists more accurate information.
4. What else can fossils tell us about?
   Fossils also tell us about animal behaviour and climate millions of years ago.
5. Are there any pieces of useless information in palaeontology?
   No, because with each new piece of information, we understand more about how life developed.

3 Complete the idea web to summarise what we learn from fossils. Add ideas you have from your book and from this unit so far.



4 Write. When you walk in a park or in your neighbourhood, what evidence of the past can you see? What can you learn about the past from what you see? Possible answer

We may see an old narrow stone bridge that tells us the type of material that was used for construction previously. The fact that the old bridge was narrow might mean it was built before modern day transport. A statue might be a reminder of a famous explorer or important person from the past.

5 Write. What evidence do we as individuals leave behind? Possible answer

We leave behind photos, videos, diaries or books if we are writers.
things we have made, pictures we have painted...and so on.

GRAMMAR

Reduction of relative clauses

The dinosaur **(that) he found** had massive jaws.
The scientist **(who / that) I read about** had made a significant discovery.
The fossils **(which / that) they discovered** in the cave were well preserved.
Scientists **who study** fossils are called palaeontologists. (Scientists **studying** fossils ...)
Sequoias are gigantic trees **that are** found in California. (Sequoias are gigantic trees **found** in California.)

The relative pronoun (*that, who, which*) can be left out if there is a new subject and verb following it: *The book* **(that)** *I read was about dinosaurs.*

If the relative pronoun is followed directly by a verb, it cannot be left out. Sometimes we can use the verb in the *-ing* form or a past participle instead: *The scientists* **who study / studying** ...

1 Rewrite the statements, reducing the clauses. Then listen and tick **T** for *True* or **F** for *False*. 2.09

	T	F
1. They are the largest invertebrates that live on the planet.	☑	☐
They are the largest invertebrates living on the planet.		
2. Scientists who study them spend a lot of time under water.	☐	☑
Scientists studying them spend a lot of time under water.		
3. The giant squid that the researchers discovered has the biggest eyes in the animal kingdom.	☑	☐
The giant squid the researchers discovered has the biggest eyes in the animal kingdom.		
4. Their eyes allow them to see things that other animals wouldn't see.	☑	☐
Their eyes allow them to see things other animals wouldn't see.		
5. They have a diet that consists of fish, shrimp and crabs.	☐	☑
They have a diet consisting of fish, shrimp and crabs.		

2 Read the letter. Underline the relative clauses. Choose four to rewrite as reduced clauses.

Dear Mum and Dad,

Surprise! I've written you a letter, which you can hold in your hands, instead of just another e-mail.

The family who I am staying with is very friendly. This weekend, they took me to a place that is called Loch Ness. I learnt that 'loch' is a Scottish word that means 'lake'.

There are stories of a Loch Ness monster, called Nessie, that go back to the sixth century. The famous photo of Nessie, which was taken in 1934, kept the legend alive for years and years. But it was just a model of a dinosaur head that floated on a toy submarine. It was created, apparently, by an unhappy journalist.

There are still reports from people who say they have seen the prehistoric creature because they can clearly see its huge long neck. For hours we sat by the lake and enjoyed the picnic that we had brought. There wasn't an ancient dinosaur to be seen!

See you soon,

Tammy



The family I am staying with is very friendly.
They took me to a place called Loch Ness.
Loch is a Scottish word meaning 'lake'.
There are stories of the Loch Ness monster, called Nessie, going back to the sixth century.
The famous photo of Nessie taken in 1934 kept the legend alive for years and years.
It was just a model of a dinosaur head floating on a toy submarine.
There are still reports from people saying they have seen the prehistoric creature.
We sat by the lake and enjoyed the picnic we had brought.

WRITING

If we answer the five Ws: who, what, when, where and why (how is also included in this group) when writing a news report, then we will make sure we include all the necessary details about the situation we are describing. We should try to include most of this information near the beginning of the report. That way, our reader understands what the topic is about and will want to read more.

1 Organise.

1. Your task is to *write a news report about a discovery of a giant of the past or the present.* You can use a topic from this unit or another giant that you find interesting. Think of five *Ws* and *How* that you are going to answer. Write each question on a line in the table. Look back through the unit or do some research on the Internet to make sure you can answer your questions.

2. Plan your writing. You'll need an introductory paragraph with a topic sentence. Your topic sentence will state what your news report will be about. Write your topic sentence here:

Try to answer your questions in the first paragraph. Use the remaining one or two paragraphs to add extra information.

Finally, you'll need a concluding paragraph. It will summarise why the discovery of the giant you have chosen is extraordinary.

2 Write.

1. Go to page 103 in your book. Re-read the model and writing prompt.
2. Write your first draft. Check for organisation, content, punctuation, capitalisation and spelling.
3. Write your final draft. Share it with your teacher and classmates.

Now I Can ...



- **talk about giant plants and animals of the past and present.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Would it be possible to have giant animals like dinosaurs today? Give your reasons.

Possible answer: It would be impossible to have giant animals today on land
because there would not be enough food for them.

Which giant do you find the most extraordinary? Why?

Sample answer: I find the sequoia tree, the President, the most extraordinary
because it has lived through so much of human history.

- **use relative clauses to define and describe.** Possible answers ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Nizar Ibrahim, who loves his work, was determined to find *Spinosaurus*.

The place where *Argentinosaurus* once lived was Patagonia in Argentina.

- **use reduced relative clauses.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Reduce the following clauses.

I watched a documentary that explained how some reptiles were able to fly.
I watched a documentary explaining how some reptiles were able to fly.

Anyone who visits a Natural History Museum will be able to travel back in time.
Anyone visiting a Natural History Museum will be able to travel back in time.

- **write a news report about a discovery from the past or present.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

Write five *W* questions about a giant from this unit. Possible answers

When did *Spinosaurus* live?
Where did it live?
What did it eat?
How was it similar to a crocodile?
Why did it have a crest on its back?

YOU DECIDE **Choose an activity.** Go to page 95.

Units 5–6 Review

1 Read. Write the correct words in the blanks.

achievement	driven	encounter	globe	high-tech
investigate	look	motivation	pioneer	purpose
remote	require	route	set	traits

Exploration New and Old

Endurance is a new (1) high-tech underwater vehicle. Its (2) purpose is to (3) investigate the ocean floor of the Antarctic. This is really just a test before *Endurance* is sent to Jupiter's (4) remote moon, Europa. NASA is curious to (5) look into what lies under Europa's frozen surface and will use *Endurance* to find out. Of course this (6) encounter is still in the future.

Endurance actually gets its name from the ship that (7) pioneer Ernest Shackleton used to sail halfway across the (8) globe. His goal was to reach the Antarctic and to (9) set a record by being the first to cross this continent.



The expedition was (10) driven by his energy, enthusiasm and (11) motivation.

Unfortunately, the *Endurance* got trapped in the ice. The crew tried to cut a (12) route through the ice manually, but didn't succeed.

Shackleton's goal suddenly changed from polar exploration to rescuing all of his 27 men. He had all the (13) traits of a great explorer, but saving his crew members became his greatest (14) achievement.

2 Listen. There are two statements for each description. Circle the best answer. 2.01

1. The dinosaur described is a *carnivore* /(*herbivore*).
   It was preyed on by *Tyrannosaurus rex* /(*Giganotosaurus*).
2. The ancient pyramids were discovered recently *near the Nile River* /(*under the sea*).
   The pyramids are *huger* /(*older*) than the Egyptian pyramids.
3. The giraffe's heart is bigger than a *newborn baby*/ *a whale's heart*.
   A giraffe's heart is 61 cm. (24 inches *long*) / *in diameter*.
4. For the speaker, the experience of climbing to the top of the world's tallest building would be useless /(*frightening*).
   The views from the outdoor observatory *are an advantage*/ *show ancient monuments*.

3 Read. Then circle the best answer.



The book *Around the World in Eighty Days*, (1)**which**/ **that** was written by the French author Jules Verne, described the start of a new global tourism in the late nineteenth century.

The main character, Phileas Fogg, was a rich man (2) **which** / **who** had been living alone for many years. He had recently employed a Frenchman, (3)**whose**/ **who** name was Passepartout, to be his assistant. One day, while he (4)**was reading**/ **had read** the newspaper at his club, he saw an article about a new section of railway that (5) **opened** / **had opened** in India. It was now possible to travel around the world in eighty days. Phileas's friends encouraged him to take the trip. They agreed to pay him £20,000, (6) **that** / **which** was a lot of money in those days, if he was successful.

As they (7)**were travelling**/ **had travelled** eastwards around the globe, Phileas and his assistant had many adventures. They also discovered that the newspaper article had been wrong about the railway line. They had had to buy an elephant (8) **X** / **that** could take them along that route.

Thanks to the time difference, the two travellers managed to make it back across (9)**the**/ **X** Atlantic from (10)**the**/ **X** United States in eighty days – in time to win the money for their achievement.

4 Underline the relative clauses. In your notebook, rewrite the sentences that can be reduced.

Dear Mum and Dad

The trip is going really well. I have visited the places that you recommended.

I'm very glad that I did. My favourite place was where you both first met.

It was interesting to meet Johan, who was the best man at your wedding.

It's a shame I couldn't meet Great Aunt Gloria who lives in Rome, but she is on holiday herself!

See you soon,

Gina

I have visited the places you recommended. I'm very glad I did. It was interesting to meet Johan, the best man at your wedding.

Unit 7
Creative Problem-Solving

1 Follow the steps. Read and cross out the words listed below. Then write a definition of the word that's left and say why it's important.



Cross out:

1. the word that describes a tool or machine made for a special purpose. device
2. the word that describes the physical, electrical part of a computer. hardware
3. the word that means to find an answer or explanation to a problem. solve
4. the word that means not too expensive. affordable
5. the expression that describes what you do when you experiment with ideas. play around with
6. the word that is associated with software that everyone can use. open source
7. the word that describes programs run on a computer. software
8. the expression that describes an active way of learning by actually doing practical activities. hands-on
9. the word that means to encourage someone to do something creative. inspire
10. the word that means you have creative ideas to deal with different situations. resourceful
11. the word that describes putting something into practical use. application

The word left is failure.

Failure is not being successful in doing something.

It's important because you need failure to encourage and help you get better at the things you do.

2 Listen to the interview. Fill in the blanks with the words from the box. Listen again and circle the correct answers. 2.01–2.02

affordable	device	failure	hands-on	maker labs	software	solving

1. The school's recent maker labs have attracted (**media attention**)/ **the interest of a computer company**.
2. Hands-on learning is encouraged by **failure** (**maker labs**).
3. The maker lab was affordable thanks to **parents'** **support** (**funding**).
4. Solving the problem of where to put the lab was (**easy**) / **not easy**.
5. The school bought hardware and software, but also more **reference books** (**devices**).
6. Students aren't afraid of failure because it's part of **a computer programme** (**being an innovator**).





3 Unscramble the words. Write the questions. Then write your answers. Answers will vary.

1. you / who / what / inspires / or
   Who or what inspires you? / What or who inspires you?
2. everyday / you / device / what / helps
   What everyday device helps you?
3. are / resourceful / you / how
   How are you resourceful? / How resourceful are you?
4. ideas / now / playing / what / around / are / with / you
   What ideas are you playing around with now?

GRAMMAR

Wish and *if only*: Expressing wishes and regrets

I wish our school had a 3D printer.

I wish 3D printers were more affordable.

I wish our school had bought open-source software.

I wish they would stop copying my designs!

If only I could inspire young children.

If only our school could have maker labs.

If only my innovation had been successful.

We use *wish*/*If only* + past simple to express a wish (when you want a situation to be different). Remember to use *were* for the verb *to be*.

We use *wish*/*If only* + past perfect to express a regret about something in the past that cannot be changed.

1 Unscramble the words. Write the sentences. Then listen and match each situation to the corresponding sentence. Write the number on the line. 2.03

4 a. software / had / I / the / I / wish

I wish I had the software.

2 b. hands-on / were / a / if only / person / I

If only I were a hands-on person.

1 c. it / I / worked / wish

I wish it worked.

5 d. us / wish / time / she / I / more / had given

I wish she had given us more time.

3 e. problems/ earlier / would detect/ researchers / brain / if only

If only researchers would detect brain problems earlier.

2 Read. Change the form of each underlined word to complete the first sentence. Then complete the second sentence with the correct tense of the verb provided in brackets.

1. I didn't interpret the data correctly.
   If only my interpretation had been (be) correct.
2. This device will not benefit disabled people.
   I wish this device would benefit (benefit) people with disabilities.
3. The maker lab transformed the library at my friend's school.
   If only a similar transformation would happen/had happened (happen) at our school!
4. The hardware didn't have a wireless connection.
   I wish the hardware had been connected (be connect) wirelessly.
5. They didn't solve my technical problem.
   If only they had found (find) a solution to my technical problem.

3 Write sentences about wishes or regrets. Use *if only*/*I wish* and an appropriate word from the box for each situation.

affordable **approach** **experiment** **failure** **interpret** **solve**

1. You are very nervous before your test.
   Possible answers:
   If only I weren't afraid of failure.
2. Your school isn't very hands-on.
   I wish my school had a hands-on approach.
3. You want to buy new software but it's too expensive.
   I wish the software were more affordable.
4. You experimented with the 3D printer and detected a problem.
   I wish I could solve the problem with the 3D printer.
5. Your headset reads brainwaves incorrectly.
   If only my headset wouldn't interpret brainwaves incorrectly.

1 Listen and read. As you read, consider some reasons people don't always succeed at first. 2.03

No Success without Failure

* How many times have you wondered, 'Why didn't that work out?' about something you did? How many times have you thought, 'If only ...'?

* History shows us that there is no need to worry. The message from inventors and explorers, from scientists and artists, is that every cloud has a silver lining. If at first you don't succeed, try again, because there is no success without failure.

* Behind every invention we see around us, there are endless hours of playing around with ideas, of planning and persistence, and thousands of stories of rejection and failure.

* For example, take the first commercial light bulb that revolutionised the world in 1879. It took Thomas Edison 10,000 unsuccessful attempts to produce it. When a reporter asked him how it felt to fail 10,000 times, Edison simply replied, 'I didn't fail 10,000 times. The light bulb was an invention with 10,000 steps!' Likewise, Oprah Winfrey, the famous talk show host, was not discouraged from appearing on television when producers told her she did not have a good TV image. Now, even though she grew up in poverty, she owns her own TV network and she is one of the world's most successful women.

* Henry Ford designed the lightest car that had ever been made. However, it took so long to finalise his prototype that one company lost interest and another company rejected a lot of his ideas. Ford didn't like to be hurried or have others interfere. In the end, he set up his own company, which is still successful today.

* Walt Disney's famous Mickey Mouse character was rejected at first for being too scary. Later Disney was fired from his first job and was told he had no original ideas!

* These examples, and thousands more, show us that we should never be discouraged. We should see life as a mountain of solvable problems. Each failure is a learning experience we should use to move forward and improve.



2 Match each paragraph with a summary. Write the letter.

E 1. To do something well takes time.
F 2. Failure can make people lose their jobs.
D 3. It's important to stay positive.
A 4. We all experience failure.
G 5. We should never give up.
C 6. Every invention has a story to tell.
B 7. We have examples of failure and success from the past.



3 Write. From the reading, list the different ideas that express failure and success. Then add one of your own.
Possible answers:

There is no success without failure.
Success takes time. Every cloud has a silver lining.
Sometimes you have to try several times before you succeed.
Every time you re-do something, you make it better.
It's a healthy process.

4 Imagine that a friend has difficulty with a task. What advice would you give him/her?

Answers will vary.

GRAMMAR

Adverbs: Expressing different levels of intensity

People's imaginations are **really** surprising. (+)

I **sort of** hope her invention will do well. (-)

It's **rather** difficult to understand the concept. (+)

He **completely** forgot to bring his equipment. (+)

The wireless device has **hardly** been used. (-)

We use adverbs to make verbs, adjectives or other adverbs stronger (+) or weaker (-). These adverbs are called intensifiers.

(+) *so, very, really, extremely, certainly, rather, completely*
(-) *slightly, somewhat, kind of, sort of*

The adverb *quite* can be (+) or (-) depending on the word that follows.

1 Listen. As you listen to the conversations, underline the intensifiers. Then circle the intensifier that has the same effect as the underlined word. 2.03

1. A: Some scientists can be really shy. (**very**) / **hardly**
   B: That's true. Some are practically terrified if they have to talk in public. (**almost**) / **barely**
2. A: The design of this device is really complicated. **sort of** / (**extremely**)
   B: You're right. I could hardly work it out myself. **completely** / (**barely**)
3. A: The young inventor was somewhat disappointed. He didn't win at the science fair. (**slightly**) / **so**
   B: Yes, but he's very determined. He'll compete again. **sort of** / (**really**)
4. A: It's so exciting when young inventors realise they can change the world. (**rather**) / **kind of**
   B: Yes. And the amazing thing is that some are extremely resourceful. (**totally**) / **sort of**

2 Write. In your notebook, write sentences with the words provided. Answers will vary

1. really / inspiring
2. kind of / wanted
3. almost / solved
4. quite / disappointing
5. hardly / a surprise
6. completely / amazing

3 Read part of an interview with Jack Andraka. Underline the adverbs of intensity. Then read the statements below and tick **T** for *True* or **F** for *False*. Rewrite the false statements to make them true.

How did you get involved in cancer research?

When a very close family friend died from cancer, it made me really want to find a way of detecting cancer earlier. I wanted people to have a much better chance of surviving.

It's extremely sad that a lot of people die every day from the disease, and it certainly motivated me in my research. I also want to make sure that more people know how absolutely important it is to donate to research.

How do you manage school and work?

After school, I almost always go to the lab to work on my projects. I barely go out, but I do have a social life. I have learnt to balance study, work and travel.

What's your main goal in life?

My goal is to be completely committed to innovation and finding further solutions to problems in medicine and the environment.



	T	F
1. Jack hardly knew the friend who had died of cancer.	☐	☑
2. The death of a friend made Jack very determined to find a way to detect cancer sooner.	☑	☐
3. Donating to cancer research is almost unnecessary.	☐	☑
4. He can hardly do school work and lab work on the same day.	☐	☑
5. Jack practically never goes out.	☑	☐
6. He sort of finds it difficult to balance study, work and travel.	☐	☑
7. He is totally committed to being an innovator.	☑	☐

1. He was a very close family friend.
2. It's absolutely important.
3. He almost always does both.
4. He's kind of learnt to balance study, work and travel.

WRITING

We use exemplification essays to illustrate a topic with examples. If you choose good examples, you can support your topic better as you make it more accurate, believable and interesting. Remember to use phrases such as:

- for example
- examples include
- specifically
- to demonstrate
- for instance
- to illustrate
- such as
- a good example is
- in particular
- namely

1 Organise.

1. Your task is to write an *exemplification essay about a common problem and how an everyday object could be used to solve it*. Think of a common problem and what object could help you. Research *life hacks* on the Internet to help you come up with ideas for several uses of your simple object. Write a list of the different uses of your object below.

Simple Object	
Uses	

2. Plan your writing. You'll need an introductory paragraph that will describe how you experienced a common problem. Your topic sentence will introduce the context. Write your topic sentence here:

3. You'll need two to three body paragraphs to describe other uses you discovered for the object that helped you solve your problem.
4. Finally, you'll need a concluding paragraph. Here you can give your opinion about how useful the object you used is.

2 Write.

1. Go to page 123 in your book. Re-read the model text and writing prompt.
2. Write your first draft. Check for organisation, content, punctuation, capitalisation and spelling.
3. Write your final draft. Share it with your teacher and classmates.

Now I can ...



- **talk about problems and how people can solve them creatively.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  What is the role of failure in creativity? Possible answers

  If you don't take risks, you'll never try anything new. You mustn't be afraid to test new ideas. If you fail, trying again can improve your original idea.

  What do you do when you have a problem to solve?

  When I have a problem, I look at lots of different resources to help me understand it.

  I also talk to friends and get different opinions.

- **use *wish* and *if only* to express wishes and regrets.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Write three sentences to express your wishes and regrets about your experience with technology. Refer to the present, the past and the future. Possible answers

  If only I had a smartwatch!

  I wish I had invented a robot to help me clean my room.

  I wish we would have more opportunities to use 3D printers.

- **use adverbs to express different levels of intensity.** Possible answers ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Complete the sentences. Use your own ideas with adverbs of intensity.

  Teen inventors can be very/quite resourceful.

  You have to be really dedicated to be an innovator.

  He was extremely curious about using the 3D printer.

- **write an exemplification essay about using an everyday object to solve a common problem.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  What problems can you solve by using bicarbonate of soda?

  Give some examples using the expressions you've learnt. Possible answer

  Bicarbonate of soda is kinder to the environment than other chemical products.

  We can use it, for instance, to clean floors. In particular, it's great for cleaning appliances such as microwaves and ovens.

YOU DECIDE **Choose an activity.** Go to page 96.

Unit 8

Art Connections

1 Complete each sentence with a word from the box. Make any necessary changes. Then match each sentence to the correct picture. Write the number.

depict	perspective	preserve	primitive	reaction	technique

2 a. Some art is controversial and can cause a strong reaction.

4 b. The artist's style draws us in and makes us see the subject from a different perspective.

1 c. The mural depicts her love of nature.

3 d. There are many techniques to restore and help preserve paintings from damage.

5 e. We finally tracked down the cave with the primitive cave paintings.

1. 
2. 
3. 
4. 
5. 

2 Read. Circle the best answers.

Since prehistoric times, humans have wanted to leave their **medium** / **mark** on the world. Historians think that many of the images scratched on trees or rocks were just **symbolic** / **controversial**. This was probably how early humans **drew in** / **came up with** a way to mark their territory or identify where food and water could be found. At some point, **artwork** / **primitive** man thought of ways to **track down** / **preserve** their work better by using new **techniques** / **powers**. Research suggests that the earliest humans travelled quite far to **depict** / **track down** the minerals they needed to help them paint and make their paintings last.

It was a great **medium** / **accomplishment** by early humans to paint on cave walls. They used simple tools, had little light and feared wild animals that were roaming outside their caves. It was quite a **dramatic** / **controversial** situation to paint in! What would our ancestors' **reaction** / **power** be if they could see us taking photos on our mobile phones today?

3 Listen. Write the question for each description of a piece of art. Use one word from the box in each question. Each word can only be used once. 4.08

accomplishments	come up with	depict	draw in	medium	reaction

1. What does the painting depict?
2. What medium did the artist use?
3. What draws her in and inspires her?
4. What reaction did the image cause?
5. What idea did the artist come up with?
6. What were her (Frida Kahlo's) accomplishments?

GRAMMAR

Reported speech: Describing what others say

'A good image should communicate instantly.'	He explained that a good image should communicate instantly.
'Images are still effective, otherwise we wouldn't use them.'	The photographer pointed out that images were still effective, otherwise we wouldn't use them.
'You must use an image. It's worth a thousand words!'	She told us we had to use an image because it was worth a thousand words.
'The landscapes I saw yesterday made me cry.'	He claimed the landscapes he had seen the day before had made him cry.

When we report what somebody else says, we may need to change the verb tenses as follows:

Past simple / present perfect → past perfect
Past perfect / *should* / *would* → stay the same
Some modal verbs change: *must* → *had to*

We usually have to change the pronouns and adverbs of time and place. This is because you may be reporting in a different situation or context, or at a later time.

'I saw the exhibition **here last week**.' – She said that **she** had seen the exhibition **there the week before**.

Remember to use different reporting verbs to add variety.

3 Listen to the quotes about photography. Complete the sentences using reported speech. Then underline the reporting verbs. 4.07

1. He suggested that the eye had to listen before it looked.
2. She pointed out that photography was a medium that had helped people to see.
3. She claimed that the smallest thing could have a dramatic reaction.
4. He pointed out that a photographer should know where to stand.
5. She reflected that the best photo was the one she would take the next day.
6. He explained that his photos showed places that people hadn't been to before.

2 Read. Use the words from the box to fill in the blanks. Then complete the sentences using reported speech.

accomplishment	admiring	artwork	contemporary	critic	dramatic
impressive	medium	preserved	reaction	themes	

'You must see Michelangelo's Creation when you visit Rome next week, Ana,' advised my friend, Paolo, who also happens to be an art (1) critic. 'I prefer (2) contemporary art, modern techniques and bold colours,' I explained. 'And I don't like religious (3) themes.,' I added. 'It'll be an experience you'll never forget!' he insisted. So I tracked down the Sistine Chapel in the Vatican but couldn't see this famous painting. 'I can't find Michelangelo!' I declared after 20 minutes. A lady nearby whispered, 'You should try looking up!' I did and my (4) reaction was too loud and (5) dramatic. 'This is the most (6) impressive painting I've ever seen!' I exclaimed. Faces turned with a 'Shhhh!' and I realised that they had all been (7) admiring the ceiling. The painting really draws the room in, and despite being over 500 years old, the colours are really well (8) preserved. It's such an (9) accomplishment! How did Michelangelo depict these scenes on this high, horizontal surface? I texted Paolo, 'This (10) artwork has given me neck ache!'

1. Paolo suggested that Ana had to see Michelangelo's Creation when she visited Rome the following week.
2. Ana explained that she preferred contemporary art, modern techniques and bold colours.
3. She added that she didn't like religious themes.
4. He insisted that it would be an experience she would never forget.
5. A lady whispered that she should try looking up.
6. Ana claimed that it was the most impressive painting she had ever seen / the artwork had given her neck ache.

3 Write. Report three memorable things family or friends said to you last week. Use different reporting verbs. Answers will vary.

1. My sister declared that she had just finished her painting for art class.
2.
3.
4.

1 Listen and read. As you read, notice the similarities and differences between Slinkachu and Willard Wigan. 02.03

Tiny People, BIG Places



When we think of urban art, we probably think of big bold walls with artwork on them. But it's not just big bold pieces that make an impact. Small figures can produce a big reaction, too.

Slinkachu is a British artist who creates small worlds in big urban landscapes. He uses one-centimetre-high figures from train sets for his characters. The figures are plain grey when Slinkachu buys them, but he comes up with different ways to paint them. He also collects a lot of objects to use as props. These are small objects that help to build a scene. For example, a bottle top could be a boat, a dead insect could pull a cart, or a tennis ball could be a desert island.

Slinkachu thinks of each scene he wants to create as a miniature film set. For instance, a hole in a wall could be a cave, or a puddle could be a lake. He glues the figures into a scene and uses the detail around them to help tell the story.

He then photographs his scenes and displays them in exhibitions. He often has to lie down in the street next to the figures to take the photo from his subjects' perspective.

The artist says that working in the street can be difficult because people or police stop to ask what he's doing. He also has to wait until the light or weather conditions are right so that the characters look real in their environments and don't just look like little plastic toys. His themes seem to be about the sadness of city life, and his scenes usually tell stories of fear and loneliness. He says that although we may think of places around the world as being very different, people experience the same kind of feelings.

After Slinkachu takes his photo, he leaves his little people for others to find and collect. He likes to think that their stories continue, just like those of real people we pass in the street in a moment and never see again.

2 Read. Then tick **T** for *True* or **F** for *False*. Rewrite the false statements to make them true.

	T	F
1. Slinkachu's figures fit into the eye of a needle.	☐	☑
2. Each miniature scene tells a story.	☑	☐
3. He takes photos of his figures from their perspective.	☑	☐
4. He also takes photos of people in the street.	☐	☑
5. The right weather conditions are important for making his characters look realistic.	☑	☐
6. He uses the same figures in different settings.	☐	☑

1. They are one centimetre in size.
4. People in the street stop to ask him what he's doing.
6. He leaves his figures for others to find.

3 Take notes. Use the table to compare Willard Wigan and Slinkachu.

	Willard Wigan	Slinkachu
Artist	British sculptor, interested in micro-sculpting when 5, had dyslexia as a child and was told he was a failure.	British artist.
Medium	Miniature figures made from nylon, spider web, no glue, rarely paints.	Buys and paints figures from train sets. Glues the figures to each scene.
Challenges	It's a long, difficult process. He has to slow his breathing.	People in the street, weather conditions.
Theme/Purpose	To show the world that little things can be the biggest things. They can make you feel big.	Scenes depict fear and loneliness of big cities, people experience similar things all over the world.

4 Write. How many ideas can you think of for using a tennis ball? Be creative. *Possible answer*

Tennis ball can be halved and used to silence chair legs on floor; a puppet head; back massage on a chair seat; halved and used as a dish / flower pot; use as a piggy bank; squeezed to exercise hand muscles

GRAMMAR

Two- and three-word verbs

Separable	Inseparable
The museum **put up** *his paintings.* The museum **put** *his paintings* **up.** The museum **put** *them* **up.**	He **looked after** *his camera equipment.* He **looked after** *it.* She **looked up at** *the images on the ceiling.* She **looked up at** *them.*

Some two-word verbs can be separated, but others cannot.

Many two-word verbs need an object. With **separable** verbs, the object can go either between the two parts or after: *He put* ***his camera*** *away. OR He put away* ***his camera****.*

If the object is a pronoun, it must always come between the two parts: *He put* ***it*** *away.*

With **inseparable** two-word and three-word verbs, the object and object pronoun can only go after the verb parts: *He flew over* ***the rain forest****. He flew over* ***it****. He looked forward to* ***the exhibition****. He looked forward to* ***it****.*

1 Listen. In your notebook, write each sentence replacing the object you hear with an object pronoun. Then underline the two- and three-word verbs. 02.04

1. They cleared it off.

2 Re-write each sentence twice. First, move the position of the object if it is possible. Then, replace the object with a pronoun.

1. The police tracked down the art thief.
   The police tracked the art thief down. The police tracked him/her down.
2. They put away the equipment.
   They put the equipment away. They put it away.
3. She went up to the famous photographer.
   She went up to him/her. (Separation isn't possible.)

3 Read this student's presentation and underline the two- and three-word verbs. Then use an underlined verb phrase from the text and rewrite each sentence so that it has the same meaning.



Today I looked up my favourite artist, Frida Kahlo, for a presentation. I found out that she grew up in Mexico and started off painting in bed after a terrible accident. She was a determined woman, though. She put up with a lot of pain and got on with her life. Most of her paintings are self-portraits showing her suffering. Their bright, bold colours and painful details really draw viewers in.

She fell in love with and married the famous Mexican artist, Diego Rivera, after she asked for his opinion about her artwork.

Later on in her life, Frida went off to Paris. People raved about her work and she met other famous artists, such as Pablo Picasso. Years later, back in Mexico, she had her first solo exhibition. But because she had become ill again, she turned up at the opening of her exhibition in an ambulance. She had to be picked up and carried on a bed. You have to totally admire her and her paintings!

1. The writer researched the artist. The writer looked up the artist.
2. The writer discovered information. The writer found out the information.
3. Frida spent her childhood in Mexico. Frida grew up in Mexico.
4. She began painting in bed. She started off painting in bed.
5. Frida accepted a painful situation. Frida put up with a lot of pain.
6. She continued with her life. She got on with her life.
7. Her paintings attracted viewers. Her paintings drew viewers in.
8. Frida realised she loved Diego Rivera. Frida fell in love with Diego Rivera.
9. Frida wanted to know what Diego thought. Frida asked for his opinion.
10. People were enthusiastic about Frida's work. People raved about Frida's work.
11. She arrived at the opening in an ambulance. She turned up at the opening in an ambulance.

WRITING

When you review a piece of art, include both facts and opinions. Find out about the artist and the context in which he/she produced the art. Use this information to help you understand the art and form your own opinion about it.

Make sure you answer these questions in your review:

- What do you see?
- How did the artist create the work?
- Why did the artist create the work?
- What is your reaction to the work?
- How does it make you feel?
- What does it make you think of?

1 Organise.

1. Your task is to *write a review of a piece of artwork* that you have seen in this unit or elsewhere. Choose a piece of artwork. Do some research about the work and the artist and write the answers to the questions in the table below.

What do you see?	How did the artist create the work?
Why did the artist create the work?	What is your reaction to the work?

2. Plan your writing. You'll need an introductory paragraph with a topic sentence. Your topic sentence will introduce the artwork you are going to review. Write your topic sentence here:

_____

You'll need body paragraphs with answers for each question. Remember to include facts and opinions.

Your concluding paragraph will describe your feelings and reaction to the artwork.

2 Write.

1. Go to page 139 in your book. Re-read the model and writing prompt.
2. Write your first draft. Check for organisation, content, punctuation, capitalisation and spelling.
3. Write your final draft. Share it with your teacher and classmates.

Now I can ...

- **talk about how art connects us across time and cultures.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Possible answers:

  How can we connect with a cave drawing that is over 40,000 years old?

  It helps us understand what life was like thousands of years ago.

- **use reported speech to describe what others say.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Use different reporting verbs to report the following:

  1. 'I have been honoured by the Queen.'

     The sculptor explained that he/she had been honoured by the Queen.

  2. 'You must look for Kobra's murals in Brazil next week.'

     My friend said I had to look for Kobra's murals in Brazil the following week.

- **use two- and three-word verbs.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.

  Possible answers:

  Choose one separable, one inseparable two-word verb, and one three-word verb. Write two sentences with each. First, use an object and then replace it with an object pronoun.

  1. I took down my posters./I took my posters down. I took them down.
  2. The museum looks after its artwork. The museum looks after it.
  3. She was looking forward to her next art project. She was looking forward to it.

- **write a review of a piece of art.** ☐ Yes, I can! ☐ I think I can. ☐ I need more practice.



Answer the questions about Eduardo Kobra's mural.

1. What do you see?
   It's a mural that depicts a man/person.
2. How does the artist create his artwork?
   He uses a technique of repeating squares and triangles.
3. Why do you think he paints?
   He wants to remind us of famous people's accomplishments.
4. What is your reaction to his work?
   I feel curiosity and admiration for his subjects. / It connects me to the past.

YOU DECIDE **Choose an activity.** Go to page 96.

Units 7–8 Review

1 Read. Choose the best answer to fill in each blank.

The (1) b of our lives by robotics and artificial intelligence has become a constant theme of modern times. Fifty years ago, the (2) a of 'do-it-yourself' was popular. People seemed more (3) b in everyday tasks ranging from cooking and shopping to more (4) c jobs such as putting up shelves or fixing the car.

Now a laptop can (5) a what problems our car engine may have. Computers can collect information and (6) c it. We often talk to our (7) b devices and they respond with our favourite music or with directions to the closest shopping centre.

While it's true that robots can do tasks (8) b well, humans will still need to (9) a problems creatively. For example, when there is a systems (10) c with our computer programs or when we need to (11) b whose fault it is when a driverless car crashes into another, we will probably need a human brain to analyse the problem!

What's clear is that technology will give us more free time to be (12) a and creative, and interact with each other in more personal ways!

1. a. innovation	b. transformation	c. approach
2. a. concept	b. software	c. device
3. a. decorative	b. resourceful	c. symbolic
4. a. computer	b. affordable	c. hands-on
5. a. detect	b. turn away	c. inspire
6. a. discourage	b. solve	c. interpret
7. a. primitive	b. wireless	c. affordable
8. a. slightly	b. amazingly	c. hardly
9. a. solve	b. turn away	c. inspire
10. a. application	b. hardware	c. failure
11. a. look forward to	b. work out	c. rave about
12. a. innovative	b. persistent	c. failures



2 Listen. Then underline the best ending for each statement. CD 2.40

1. You can see Kobra's work *inside exhibition centres / on walls in cities.*
2. His accomplishment comes from a combination of *colour and the people he paints / brushes and the spray cans he uses.*
3. Kobra's portraits *take us back in time / are copied from books in bookshops.*
4. Before Kobra paints, he *changes his clothes and behaviour / researches his own themes.*
5. One of the reasons he paints is *to see if he can get away with painting on buildings / to help preserve historical buildings.*

3 Read. Fill in each blank with a word from the box. Make any necessary changes to the verbs.

draw in	get off	look down on	look forward to	point out
rave about	stay	track down	work out	

Last year, my parents planned a holiday on a tiny island in the Atlantic. It wasn't the Caribbean, but it still sounded great. 'We're going to stay in a really nice hotel,' my mum (1) pointed out and quickly added, 'and you'll have Internet!' I was really (2) looking forward to it. I repeated, 'I can't wait' throughout the day. A few weeks later, it was a different story. I wished we (3) had stayed at home. As we (4) got off the plane, there was nothing but rocks. We (5) tracked down a bus and arrived at the hotel 20 minutes later. We immediately realised it wasn't the hotel in the brochure. It didn't (6) look down on a beach but on a green football field. 'But people (7) raved about this place,' I thought, 'and the reviews were excellent!' Mum went to the front desk and tried to (8) work out what had gone wrong. When she came back to the room, she slowly explained, 'There was a storm on the other island yesterday and there is no electricity. They moved us to this island instead.' 'Once there is power again, we can move to the other island,' my dad said. Well, at least I was able to get online so that I could talk to my friends. And we discovered a beautiful beach on the other side of the island! Maybe it wasn't so bad after all!



4 Underline the direct speech in Activity 3. Finish the sentences by rewriting the direct speech as reported speech.

1. Her mother pointed out that they were going to stay in a very nice hotel.
2. She added that her daughter would have Internet.
3. The daughter repeated that she couldn't wait.
4. The daughter thought to herself how people had raved about the place and that the reviews had been excellent.
5. Her mother explained that there had been a storm on the other island the day before and there was no electricity. They had moved them to this island instead.
6. Her father commented that once there was power again, they could move to the other island.

YOU DECIDE Choose an activity. Unit 1

1 Describe an extreme sport you would love or hate to do, but don't name it. Explain why you would or wouldn't like to do this sport. Use as many words from the list as you can. Ask a classmate to guess your extreme sport.

achieve	determination	enable
fashion	hazardous	mental
physical	push yourself	unbelievable

2 Read the headline. Use the sentence starters to make embedded clauses as you speculate and find out more about what happened.

Skydiver jumps from hot-air balloon without parachute!

I wonder ...
I think ...
I'd like to know ...
I'm not sure ...
Do you know if ...
I'm telling you ...

3 Describe a place that is special to you. Use the sentence starters to add emphasis.

The place where ...
The thing(s) that ...
The reason why ...
What I like best ...

4 Work in pairs. You want to do an extreme sport. Your friend tries to discourage you.

- Think of reasons for doing this sport.
- Think of reasons why your friend shouldn't do this extreme sport.
- Practise the role play.
- Act out the role play in class, or use a phone or tablet to make a video.

5 Write. Write an autobiography. Think of three main events that have helped to shape the person you are today. Describe them in chronological order.

- To plan your writing, follow the steps on page 10 of your workbook.
- Share your writing with your teacher and classmates.

6 You saw this advertisement for an extreme sport.

Ready to push yourself to the limit? Determined to test your own mental and physical boundaries? Not afraid to take risks? Then join our team and learn to overcome the obstacles in your way!

Respond to the advertisement. Write an email. Ask for more information about location, cost and instructors. Explain your experience with extreme sports so far.

Write approximately 150 words.

YOU DECIDE Choose an activity. Unit 2

1 You hear on the news that there has been a volcanic eruption in Ecuador. Many villages have been affected. How could a digital humanitarian help? Use the following words as you discuss ideas with a classmate.

amount of data	big picture
collaboration	co-ordination
measure	monitor
process	relief
scale	situation
upload	

2 Use future tenses to comment on each situation. Support your opinions with facts and reasons.

- animals – extinct
- climate change – sea level
- cancer – cure
- renewable energy – environment
- innovations – problems communities face

3 Smartphones are changing the way we do things. Use the following quantity expressions to describe how your friends use their smartphones.

- a lot of
- over half
- the majority
- a number of

4 Work in pairs. Discuss a charity with your partner.

Use these words in your discussion.

cause	fundraiser	help out
network	volunteer	

- Research a charity.
- Discuss why your school should help the charity.
- Talk about how your school will raise money for the charity.
- Practise the dialogue.
- Act out the dialogue in class, or use a phone or tablet to make a video.

5 Write. Persuade your friends and neighbours to join you in cleaning up an area in your neighbourhood. Explain why they should join you. Support your statements with facts.

- To plan your writing, follow the steps on page 20 of your workbook.
- Share your writing with your teacher and classmates.

6 You saw this advertisement.

We are looking for a team of volunteers to help the elderly with their gardening. You must be someone who loves the outdoors and nature, is in good shape and has good people skills.

Write an email to apply to work as a volunteer. Write no more than 150 words.

YOU DECIDE Choose an activity. Unit 3

1 You want to grow your own food. Give a presentation to your classmates about why you want to do this. Invite your classmates to ask questions. Use the following words in your presentation.

diverse	globalisation	harvest
impact	local	packaged
reflection	taste	wholesome

2 Describe five ways that your life would be different now if you had done things differently in the past.

For example:
If I had continued with my cello lessons, I could be playing in a youth orchestra now.

I might have travelled to Germany if I had studied German.

3 How many different ways can you replace the underlined part of the two sentences? Use comparative phrases.

a. The more I travel, the more I want to see new places.

Sample answer: The more I travel, *the more interested I am in visiting new places.*

b. The less fast food I eat, the less packaging will be used.

4 Work in pairs. You and your partner are going to celebrate a special occasion with your family.

- Choose the special occasion.
- One of you wants to go to a restaurant.
- One of you wants to celebrate and cook at home.
- Assign roles.
- Practise the conversation.
- Act out the conversation in class, or use a phone or tablet to make a video.

5 Write. Think of a film you have seen recently and write a review of it. Give facts and your opinion on the plot, characters and special effects. Would you recommend the film? Why or why not?

- To plan your writing, follow the steps on page 32 in your workbook.
- Share your writing with your teacher and classmates.

6 You see this announcement in an English-language magazine.

Hotel Reviews Wanted
Have you ever stayed in a hotel where everything went wrong?

Write a review of the hotel explaining what happened. Recommend an alternative place to stay.

The most amusing reviews will be published in our magazine.

Write your review. Write no more than 160 words.

YOU DECIDE Choose an activity. Unit 4

1 When was the last time you had fun at an event? What were the positives and negatives of that experience? Compare your experience with a classmate's experience in a similar situation. Use at least five words from the list.

accessible	cost	consume
enjoyable	excessive	facilities
litter	participate	venue

2 Read the call-to-action poster by the No-to-Plastics Movement.

We are throwing away enough plastic to circle the Earth four times! Doctors have found plastic chemicals in our bodies! We should put more pressure on businesses to stop using so much plastic. As part of our movement, you will re-use every plastic object you have. Hopefully, by 2020 we will have seen a reduction in the use of plastic!

Rewrite the poster using the passive to describe actions and processes.

3 Help this English student with gerunds and infinitives.

I want _____ (learn) to ski or snowboard.

Soon we will have to stop _____ (do) these activities.

Climate change is threatening _____ (have) an impact on snowfall.

It's important _____ (have) snow because it provides water.

I think people will continue _____ (go) to the mountains, but not for skiing.

4 Work in pairs. Your town wants to attract more tourists. Here are some of the ideas they are thinking about:

- A water park
- A wildlife centre
- More hotels
- An annual concert

- Choose two ideas.
- With a partner, talk about why these ideas would attract tourists. Discuss the environmental impact of each idea.
- Practise the conversation.
- Act out the dialogue in class, or use a phone or tablet to make a video.

5 Write. You believe that the ski industry is bad for the environment. Now it's being affected by climate change. Discuss the problems and suggest two or three solutions.

- To plan your writing, follow the steps on page 42 of your workbook.
- Share your writing with your teacher and classmates.

6 A well-known international guidebook is looking for the world's most environmentally friendly city in your country. The city that wins will have the opportunity to build a botanical garden and visitor centre.

Write your recommendation of a city in your country. Write 150 words describing the city and why it should win.

YOU DECIDE Choose an activity. Unit 5

1 If you could explore one place in the world tomorrow, which place would it be? Give your reasons. Use at least four words from the box.

achievement	**drive**	**encounter**
engage in	**exciting**	**globe**
high-tech	**investigate**	**knowledge**

Is your place similar to or very different from a classmate's? Talk to a classmate to find out.

2 Create a graphic storyboard in your notebook about the journey of your dreams. Describe the following:

- How will you prepare for the journey?
- What specific things will you do?
- What is happening around you as you are about to leave?
- What will happen on the journey?
- What will you see/feel/do when you get there?

Use different narrative tenses and provide illustrations.

3 Look at a map of the world. Imagine that you are flying west from Perth, in the western part of Australia, to Lima in Peru and then to Montreal in Canada. What places would you fly over? Write down the names of:

- two continents
- two oceans
- one sea
- one lake
- five capital cities
- one mountain range
- one group of islands

Think about whether you need to use *the* before the geographical names.

4 Work in pairs. Read the following statement.

The people who go on holiday every year have an explorer gene.

Do you agree or disagree? Give your reasons.

- Prepare your reasons.
- Assign roles.
- Practise your discussion.
- Act out the dialogue in class, or use a phone or tablet to make a video.

5 Write. Compare and contrast going on holiday to the same place all the time with a holiday where you explore a new place. Use a Venn diagram to help you think about the similarities and differences.

- To plan your writing, follow the steps on page 54 in your workbook.
- Share your writing with your teacher and classmates.

6 You have received the following email from a friend.

To: Lara **Subject:** My Dad

Hi Lara,

My dad's going to a conference near where you live. He has some free time at the weekend and would like to explore the area. Could you tell me about some places he could visit? He loves art and is very interested in history.

Is getting around easy or should he rent a car?

I look forward to hearing your suggestions.

Thanks for your help!

Nico

Write an email back to Nico in 150 words.

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YOU DECIDE Choose an activity. Unit 6

1 Imagine you travel back in time to when dinosaurs walked on Earth. With a classmate, describe what you see. Use the knowledge you have about dinosaurs and at least five words from the box.

advantage	**carnivore**	**develop**
extinction	**extraordinary**	**frightening**
gigantic	**herbivore**	**jaw**
massive	**significant**	**weigh**

2 Make relative clauses using the information below. Use *that, which, where* and *who*.

- mammoths / big and woolly animals / lived during last ice age
- mammoths originally from northern Africa
- ice age happened over 10,000 years ago / cause of mammoths' extinction
- primitive man lived at this time / mammoths hunted by man
- mammoths died when climate changed / relatives of today's elephants

Example: *Mammoths, which were big and woolly animals, lived during the last ice age.*

3 Help your friend reduce the relative clauses in this text.

The Giant Tortoise

The largest tortoises that are found in the world are in the Seychelles and Galápagos islands.

They can live for 150 years, which is a very long time. People say that you can tell the age of a tortoise by the rings on its shell. That's not true. Only people who record the birth of the tortoise know its true age.

And here is another interesting fact. Tortoises use the landmarks that are around them to create a map in their minds of their habitat.

4 Work in pairs. Interview a palaeontologist.

- Research a young palaeontologist.
- Prepare five questions.
- Assign roles.
- Practise the interview.
- Act out the interview in class, or use a phone or tablet to make a video.

5 Write. Find out about a recent discovery. The discovery could be about archaeology, space, a new species, a recent epidemic, food, health and so on.

Write a news report about the discovery. Make sure you answer the five *Ws* and *How*.

- To plan your writing, follow the steps on page 64 of your workbook.
- Share your writing with your teacher and classmates.

6 You saw this announcement on your school website.

Museum Alert!

We are putting together a guide on all the museums in our area. This will then form part of a website we are building about all the museums in the country. We need reviews from students to tell us which museums they have found the most fascinating in their local area and why.

We will include some of the reviews on our new website.

—Local Education Committee

Write your review in 120–180 words.

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YOU DECIDE Choose an activity. Units 7–8

1 Work in pairs. Your new Mars probe isn't working very well. A reporter is interviewing you about what happened. Role-play the dialogue with a classmate. Use *wish* and *if only* to express your wishes and regrets. Use at least four of the words from the box.

affordable	**device**	**failure**
flexible	**play around with**	**persistent**
software	**turn away**	

2 Improve this description. Vary the adverbs to express different levels of intensity.

My dad is very clever. He's just developed a very cool idea that uses renewable energy. Cities around the country are very excited to apply what he has invented. It will really change our road network. It's very amazing! Everyone is very impressed. My dad is very excited too because it's the first time an idea of his has been very successful!

3 Write. Research different ways to use empty plastic bottles. Write an exemplification essay. Use examples to describe the different uses you've discovered for the different types of bottles.

- To plan your writing, follow the steps on page 76 in your workbook.
- Share your writing with your teacher and classmates.

4 Read the message. Respond and give advice and encouragement.

Just found out my painting wasn't chosen for the school summer exhibition. I'm going to forget about studying art! Extremely disappointed!

Write no more than 150 words.

1 Choose a piece of art. Talk to a partner about it. Then do the following:

- Write down what your partner said using reported speech. Vary your reporting verbs.
- Take turns to read aloud the conversation you had using reported speech.

Example: *You claimed that the artwork had been painted by a child.*

In your discussion, try to include as many reporting verbs as possible.

2 Work in pairs. Each person should cut out eight equal strips of paper. Then look through Unit 8 in your book and workbook. Write down one two- or three-word verb on each strip. Mix the strips together and place them face down. Turn over each strip, one at a time and see who can be the first to make a sentence using that verb. Check meanings if necessary. Keep score!

3 Write. You're a famous artist who has just finished a masterpiece. Write a description of your artwork. Include why it's special and how you created it.

- To plan your writing, follow the steps on page 86 in your workbook.
- Share your writing with your teacher and classmates.

4 You just saw this announcement.

We are looking for volunteers to help out at an art gallery. Positions are available from June to August. Please apply in writing and explain why you would be a good candidate.

Write to ask for details. Use 150–180 words.

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