

7.2 *Bright ideas*

Aim: Develop reading skills such as understanding vocabulary in context and making inferences

Preparation: Make one copy of Worksheet 7.2 for every S.

Comment: Use after or in place of the reading on page 61.

A Pair work

- Give each S a copy of the reading. Ask: *Would you support a technology that may help to slow climate change, but which could harm the environment in other ways?* Elicit one or two examples from the class.
- Ss work in pairs to discuss. Then have pairs share their answers with the class.

B

- Explain the task. Have Ss read the article to find the answers.
- Ss work individually to complete the chart.
- Go over the answers as a class.

Answers

Benefits:

burn cooler

less need for air conditioning

Concerns:

contain 4 to 5 milligrams of mercury

mercury ends up in the groundwater

must dispose of carefully

when broken, mercury can be released

Other benefit:

people save money through lower energy bills

Other concern:

some consumers are unaware of the mercury hazard

C Group work

- Explain the task. Read the questions aloud.
- Ss work in small groups to discuss the questions.
- Have groups share their answers with the class.

A Pair work Would you support a technology that may help to slow climate change, but which could harm the environment in other ways? Discuss and share your ideas with the class.

Bright Ideas For Our Future

Many of us are looking for ways to help slow climate change. One of the most widely available technologies for doing this is the compact fluorescent lightbulb (CFL). CFLs conserve resources by using 75 percent less energy than a traditional incandescent lightbulb and by burning cooler, which reduces the air conditioning needed during hot summer months. Despite the fact that CFLs are more expensive, people who take advantage of them save money through lower energy bills and less frequent replacements. In fact, a CFL can last up to ten years.

It is estimated that a global switch to CFLs from traditional lightbulbs would reduce energy use worldwide by around 2.5 percent. Efforts are underway across the world to achieve that goal. To further encourage the switch to CFLs, many countries have banned the manufacture or importation of incandescent lightbulbs.

While CFLs have made a positive impact, they do present a problem: Each bulb contains between 4 and 5 milligrams of mercury – a highly toxic heavy



metal. As long as it stays in the bulb, this amount is not a threat, but a broken CFL needs to be handled very carefully. So, it's obvious then that a burned out CFL can't just be tossed in the trash – the mercury could eventually get into groundwater, which would be difficult and expensive to clean up. Instead, it needs to be taken to a hazardous waste recycling center where the material can be handled in a safe and environmentally responsible manner. Unfortunately, even though warnings are printed on CFL packaging, and government agencies work to inform consumers about proper disposal, some people don't heed the warnings or take proper disposal measures.

Manufacturers are currently looking for ways to decrease the amount of mercury in CFLs. Meanwhile, experts agree that more must be done to make disposal easier for consumers and to make sure the mercury does not end up in the water or air. While that continues to be a challenge, it's important that people are educated and made aware so that the benefits of this "bright idea" make only a positive environmental impact.

B Read the article. Write the phrases in the correct columns in the chart. Then add one more item in the article to each list.

burn cooler contain 4 to 5 milligrams of mercury less need for air conditioning	mercury ends up in the groundwater must dispose of carefully when broken, mercury can be released
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Benefits of CFLs	Concerns about CFLs

C Group work Discuss these questions. Then share your answers with the class.

- 1. What are some similar technologies that can reduce energy consumption and help the environment?
- 2. What technologies are still needed to reduce energy consumption?