

**Active Reading****Section: The Cycling of Materials**

Read the passage below and answer the questions that follow.

When we burn fossil fuels, we release carbon into the atmosphere. The carbon returns to the atmosphere as carbon dioxide. Cars, factories, and power plants rely on these fossil fuels to operate. In the year 2000, vehicles were the source of one-third of all carbon dioxide emitted in the United States. All together, about 6 billion metric tons of carbon a year are released into the atmosphere as carbon dioxide. Natural burning of wood or forest fires combined with the burning of fossil fuels make up this 6 billion metric tons. About half of this carbon dioxide remains in the atmosphere, so over a period of years, the amount of carbon dioxide in the atmosphere has steadily increased.

Increased levels of carbon dioxide may contribute to global warming, which is an overall increase in the temperature of the Earth. What happens to the carbon dioxide that is not absorbed by the atmosphere? Scientists estimate that over a billion metric tons of carbon dioxide dissolves into the ocean, which is a carbon sink. Plants probably absorb the remaining carbon dioxide.

**IDENTIFYING MAIN IDEAS**

One reading skill is the ability to identify the main idea of a passage. The main idea is the main focus or key idea. Frequently a main idea is accompanied by supporting information that offers detailed facts about main ideas.

Read each question and write the answer in the space provided.

1. What do most cars, factories, and power plants rely on to operate?  
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2. In what form does carbon return to the atmosphere after it is released from the burning of fossil fuels?  
\_\_\_\_\_
3. One-third of the United States' carbon consumption is used to operate what?  
\_\_\_\_\_
4. How many tons of carbon are released into Earth's atmosphere every year?  
\_\_\_\_\_
5. Why does the author mention the United States in the fourth sentence?  
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**Active Reading** *continued*

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**VOCABULARY DEVELOPMENT**

**In the space provided, write the letter of the term or phrase that best completes each statement or best answers each question.**

- \_\_\_\_\_ **6.** Global warming
- a. is carbon dioxide that dissolves into the ocean.
  - b. is an overall increase in the temperature of Earth.
  - c. is caused by natural burning of wood and forest fires.
  - d. makes up half of Earth's atmosphere.
- \_\_\_\_\_ **7.** Which of the following statements is true about fossil fuels, carbon, and carbon dioxide?
- a. Carbon dioxide returns to the atmosphere as carbon when fossil fuels are burned.
  - b. Fossil fuels return to the atmosphere as carbon dioxide when carbon is burned.
  - c. Carbon returns to the atmosphere as carbon dioxide when fossil fuels are burned.
  - d. none of the above

**RECOGNIZING CAUSE AND EFFECT**

One reading skill is the ability to recognize cause and effect.

**Read each question and write the answer in the space provided.**

- 8.** What three things cause carbon to be released into the atmosphere as carbon dioxide?

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- 9.** What is one effect of increased levels of carbon dioxide in the atmosphere?

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