

# Active Reading

## 12.3 Section: Acid Precipitation

Read the passage below and answer the questions that follow.

Thousands of lakes throughout the world are victims of acid precipitation, which is also known as acid rain. Acid precipitation is precipitation such as rain, sleet, or snow that contains a high concentration of acids. When fossil fuels are burned, they release oxides of sulfur and nitrogen. When the oxides combine with water in the atmosphere, they form sulfuric acid and nitric acid, which fall as acid precipitation. This acidic water flows over and through the ground, and into lakes, rivers, and streams. Acid precipitation can kill living things, and can result in the decline or loss of some local animal and plant populations.

A **pH** (power of hydrogen) number is a measure of how acidic or basic a substance is. The lower the number on a pH scale, the more acidic a substance is; the higher a pH number is, the more basic a substance is. Each whole number on the pH scale indicates a tenfold change in acidity.

### 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.

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

- \_\_\_\_\_ 1. In which of these forms does acid precipitation reach the surface of Earth?
- |           |                  |
|-----------|------------------|
| a. light  | c. precipitation |
| b. energy | d. oxides        |
- \_\_\_\_\_ 2. What is harmed by acid precipitation?
- |                               |                       |
|-------------------------------|-----------------------|
| a. lakes, rivers, and streams | c. animal populations |
| b. plant populations          | d. all of the above   |
- \_\_\_\_\_ 3. What does acid precipitation contain that is harmful to living things?
- |                       |                                  |
|-----------------------|----------------------------------|
| a. particulate matter | c. sulfuric acid and nitric acid |
| b. fossil fuels       | d. calcium carbonate             |

### VOCABULARY DEVELOPMENT

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

4. What three forms can acid precipitation take?
- \_\_\_\_\_

**Active Reading** *continued*

5. When an author puts something in parentheses, he or she is often explaining the word or term that came just before. How does this author use parentheses to explain *pH*?

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6. What does a pH number tell you?

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**SEQUENCING INFORMATION**

One reading skill is the ability to sequence information, or to logically place items or events in the order in which they occur.

**Sequence the statements below to trace the path of acid precipitation. Write “1” on the line in front of the first step, “2” on the line in front of the second step, and so on.**

- \_\_\_\_\_ 7. The oxides combine with water in the atmosphere.
- \_\_\_\_\_ 8. Acid precipitation falls.
- \_\_\_\_\_ 9. Sulfuric acid and nitric acid are formed.
- \_\_\_\_\_ 10. The decline or loss of plant and animal populations can occur.
- \_\_\_\_\_ 11. Fossil fuels are burned, releasing sulfur and nitrogen oxides.
- \_\_\_\_\_ 12. Acidic water runs over and through the ground, and into lakes, rivers, and streams.

**RECOGNIZING SIMILARITIES AND DIFFERENCES**

One reading skill is the ability to recognize similarities and differences between two phrases, ideas, or things. This is sometimes known as comparing and contrasting.

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

13. What does it mean when something has a high pH level? a low pH level?

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**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.**

14. What is the basic cause of acid precipitation? What are some effects?

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