

Active Reading

Ch. 11

Section: Water Resources

Read the passage below and answer the questions that follow.

Most of the fresh water that is available for human use cannot be seen—it exists underground. When it rains, some of the water that falls onto the land flows into lakes and streams. But much of the water percolates through the soil and down into the rocks beneath. Water stored beneath the Earth's surface in sediment and rock formations is called **groundwater**.

As water travels beneath the Earth's surface, it eventually reaches a level where the rocks and soil are saturated with water. This level is known as the *water table*. In wet regions, the water table may be at the Earth's surface and a spring of fresh water may flow out onto the ground. But in deserts, the water table may be hundreds of meters beneath the Earth's surface. The water table is actually not as level as its name implies. The water table has peaks and valleys that match the shape of the land above it. Just as surface water flows downhill, groundwater tends to flow slowly from the peaks of the water table to the valleys.

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. Where is most fresh water that is available for human consumption found?

2. How does water get beneath Earth's surface after it rains?

VOCABULARY DEVELOPMENT

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

3. Water stored in sediments and rocks beneath Earth's surface is called

4. The level where rocks and soil become saturated with water is called

Active Reading *continued*

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.

Read each question and write the answer in the space provided to show the sequence of the process in which groundwater is formed.

5. Water that will become groundwater falls on the surface of Earth when

_____.

6. Water first percolates through the _____.

7. Then, water reaches the _____ beneath.

8. Eventually, the water reaches the _____, where the rocks and soil are already _____ with water.

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 each question and write the answer in the space provided.

9. Why is a water table *not* like a table in your home?

10. Explain the difference between water tables in wet and desert regions.

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.

11. What movement occurs with groundwater? What causes this movement?

12. Why might a spring flow out of the ground in a wet region?

Active Reading *continued*

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

5. For what three purposes is water used in industry?

6. Name four items that the author uses as examples of the goods produced by industry.

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.

Write the three steps that show how a power plant's cooling system works.

7. First,

8. Next,

9. Finally,

RECOGNIZING CAUSE AND EFFECT

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

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

_____ **10.** Because water is used to cool power plants, it is returned to its source

- a. cleaner.
- b. faster.
- c. hotter.
- d. cooler.

_____ **11.** Industry uses water to

- a. manufacture goods.
- b. dispose of waste.
- c. generate power.
- d. All of the above

Active Reading

Ch. 11

Section: Water Pollution

Read the passage below and answer the questions that follow.

The natural process of eutrophication is accelerated when inorganic plant nutrients, such as phosphorus and nitrogen, enter the water from sewage and fertilizer runoff. Eutrophication caused by humans is called **artificial eutrophication**. Fertilizer from farms, lawns, and gardens is the largest source of nutrients that cause artificial eutrophication. Phosphates in some laundry and dish-washing detergents are another major cause of eutrophication. Phosphorus is a plant nutrient that can cause the excessive growth of algae. In bodies of water polluted by phosphorus, algae can form large floating mats, called *algal blooms*. As the algae die and decompose, most of the dissolved oxygen is used and fish and other organisms suffocate in the oxygen-depleted water.

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. Which of these are examples of inorganic plant nutrients?
- a. eutrophication and oxygen c. oxygen and algal bloom
b. phosphorus and nitrogen d. farms and lawns
- _____ 2. Eutrophication caused by humans is called
- a. artificial eutrophication. c. phosphates.
b. algal bloom. d. fertilizer.
- _____ 3. Which of the following is the best statement of the main idea of this passage?
- a. Decomposing algal blooms deplete oxygen from bodies of water.
b. Fertilizer runoff causes artificial eutrophication.
c. Artificial eutrophication damages bodies of water.
d. Phosphates in detergents are the major cause of eutrophication.

VOCABULARY DEVELOPMENT

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

4. What is an algal bloom?
- _____

Active Reading *continued*

5. Remember that eutrophication is the natural process by which a body of water gains an abundance of nutrients. Explain the distinction between eutrophication and artificial eutrophication.

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.

6. Artificial eutrophication is caused by _____.

7. It happens when

8. What is the greatest cause of artificial eutrophication?

9. Name another cause of artificial eutrophication.

10. What substance causes an algal bloom to form?

11. Why do fish die in a body of water where an algal bloom has formed?
