

Fresh Water ▪ *Guided Reading and Study*

Water on Earth

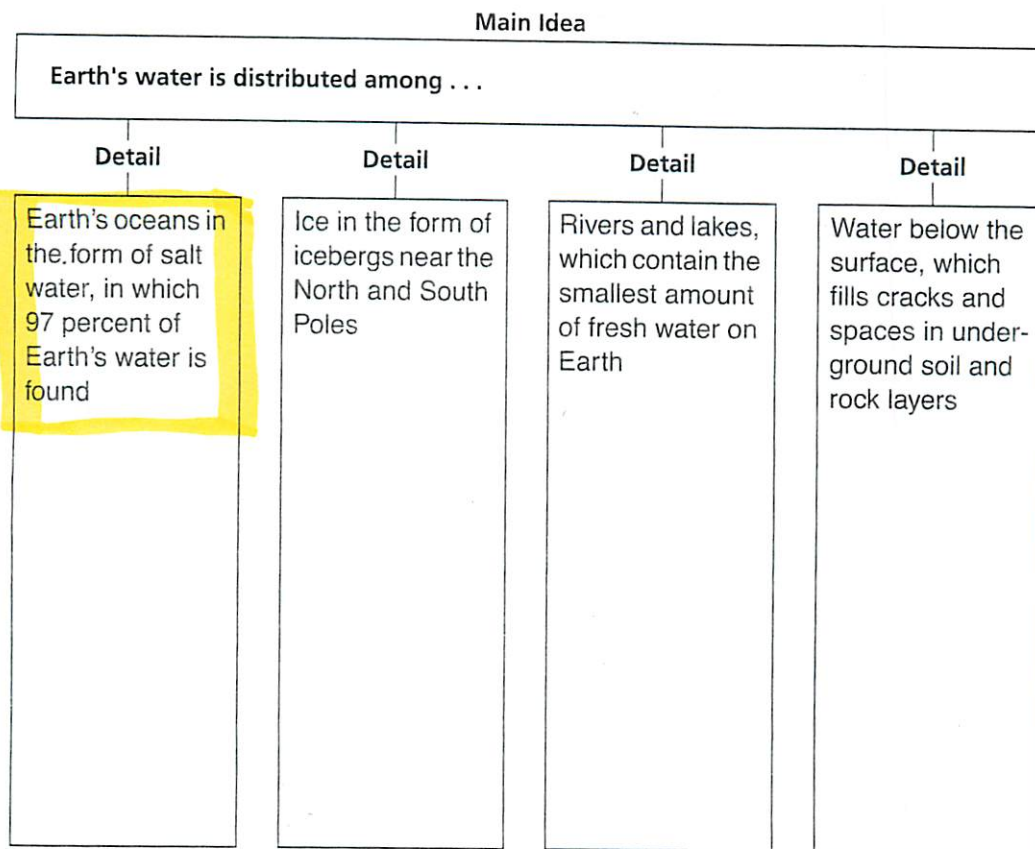
 (pp. 314–317)

This section describes how water moves through the water cycle and how water is distributed on Earth.

Use Target Reading Skills

As you read the Distribution of Earth's Water section, complete the graphic organizer. Write the main idea in the graphic organizer. Then write four supporting details that further explain the main idea.

Accept all logical answers.



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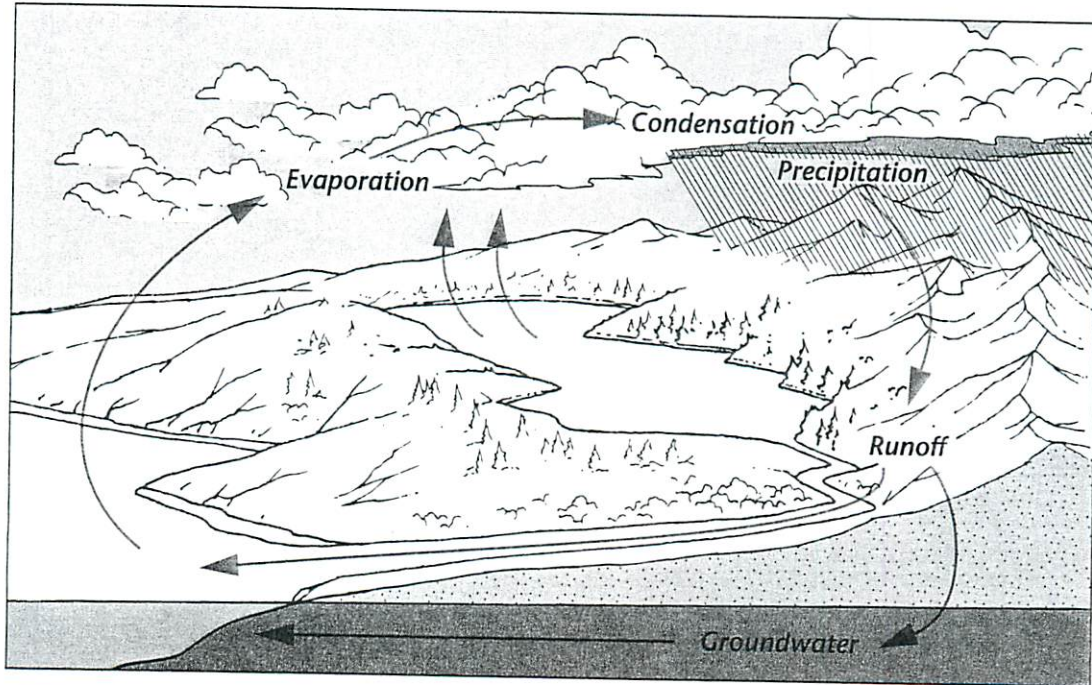
Fresh Water = 3%
Salt Water = 97%

Water on Earth (continued)

The Water Cycle (pp. 314-315)

1. Circle the letter of each sentence that is true about the water cycle.
 - a. It naturally recycles water.
 - b. It is powered by energy from the sun.
 - c. It is a continuous process.
 - d. It does not involve living things.
2. Is the following sentence true or false? All the water on Earth has been through the water cycle. _____ true
3. Is the following sentence true or false? The water cycle has ^{no} a beginning and ^{no} an end. _____ ~~false~~ true
4. What is the role of plants in the water cycle?
Plants draw in water from the soil through their roots and release water vapor into the atmosphere. transpiration
5. Add arrows to the diagram to show how water moves through the water cycle.

The Water Cycle

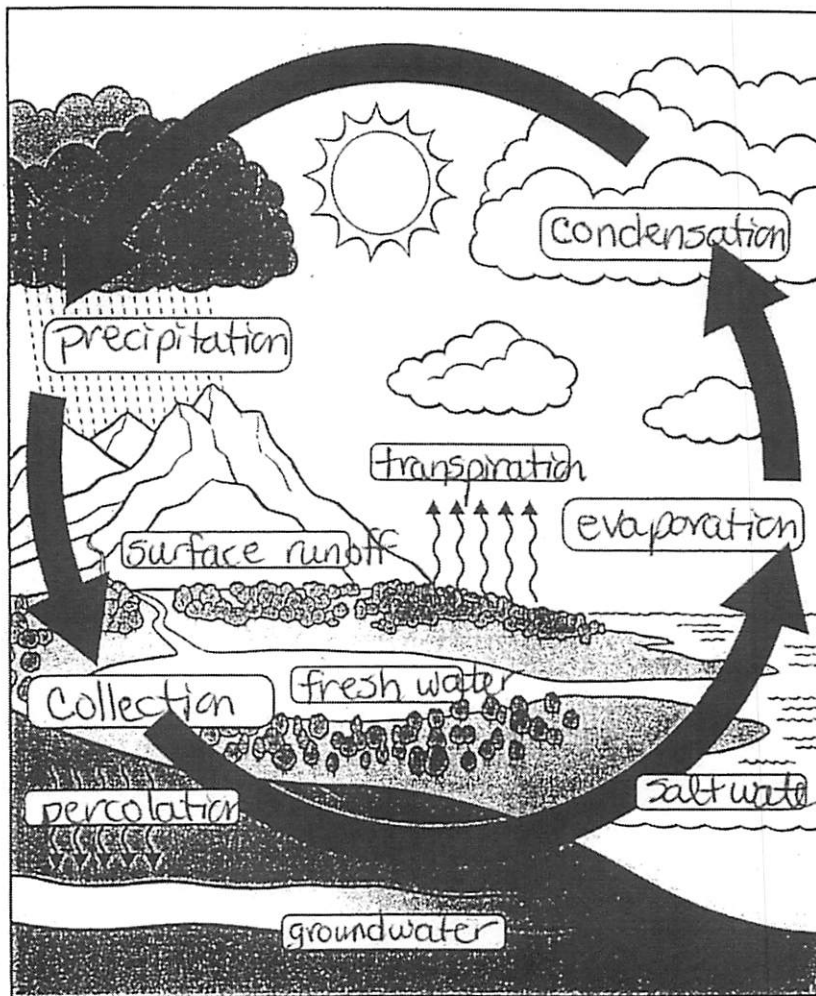


- True or False
6. Water is constantly evaporating from the surface of the ocean. True
the salt is left behind because it is too heavy.

Name Key
Class _____ Date _____

Labeling the Water Cycle

Fill in the blanks with the correct parts of the water cycle.



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7. Complete the table.

Processes in the Water Cycle

Process	Role in the Water Cycle
Evaporation	Produces water vapor from bodies of water
Condensation	Forms clouds from water vapor
Precipitation	Results in water falling to Earth's surface

8. Why does water vapor condense when it travels far above Earth?

Higher up, the air is colder. Cold air holds less water vapor than warm air, so some of the water vapor condenses.

9. Describe how clouds form.

Clouds form when water droplets clump together around tiny dust particles in the air.

10. How does precipitation occur?

Water droplets in the cloud grow larger and larger. Eventually they become so heavy that they fall to Earth.

11. List four forms of precipitation.

- a. _____ rain _____ b. _____ hail _____
 c. _____ snow _____ d. _____ sleet _____

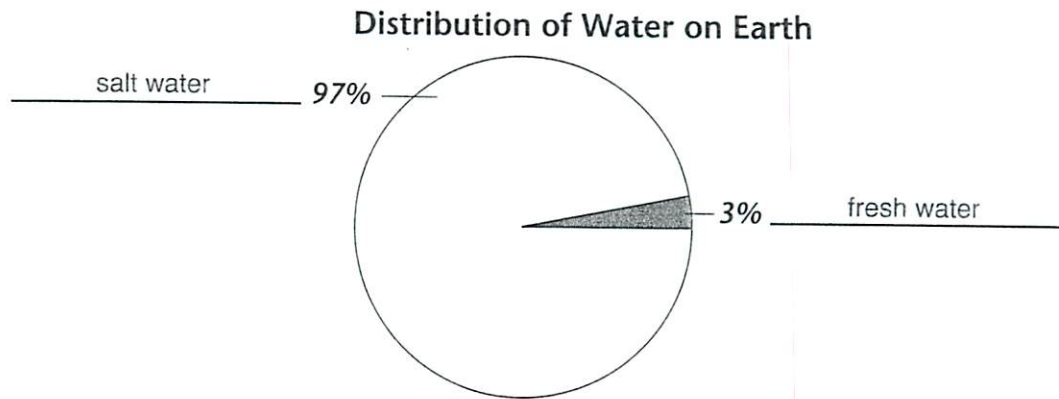
12. Is the following sentence true or false? ^{Most} Little precipitation actually falls directly into the oceans. ~~false~~ true

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Water on Earth (continued)

Distribution of Earth's Water (pp. 316–317)

13. Label the circle graph to show the percentage of Earth's water that is salt water and the percentage that is fresh water.



14. The gaseous form of water is called _____ water vapor _____.
15. Circle the letter of each sentence that is true about fresh water on Earth.
- (a.) About three quarters of Earth's fresh water is in ice masses near the poles.
 - (b.) Most fresh water in the atmosphere is in the form of water vapor.
 - (c.) Less than 1 percent of all the water on Earth is fresh water that humans can use.
 - (d.) Some of Earth's fresh water is deep underground.
16. Circle the letter of each sentence that is true about the oceans on Earth.
- (a.) All Earth's oceans are connected to form a single world ocean.
 - b. The Atlantic Ocean is deeper than the Indian Ocean.
 - (c.) The Pacific Ocean covers more area than all Earth's land put together.
 - d. The Arctic Ocean is next to the Indian Ocean.
17. Is the following sentence true or false? Icebergs are formed from frozen ~~salt~~ ^{fresh} water. _____ ~~false~~ ^{true}
18. Water that fills the cracks and spaces in underground soil and rock layers is called _____ groundwater _____.

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Surface Water (pp. 318–325)

This section explains the water cycle and how water is distributed on Earth. The section also describes the characteristics of ponds, lakes, and wetlands and explains why wetlands are important.

Use Target Reading Skills

As you read, make an outline of this section. Use the red headings for the main ideas and the blue headings for the supporting ideas.

Surface Water	
I. River systems A. Tributaries B. Watersheds C. Divides	IV. Wetlands A. Types of wetlands B. The Everglades: A wetland C. Importance of wetlands
II. Ponds and lakes A. How ponds form B. Exploring a pond C.	
III. Lakes A. Characteristics of lakes B. How lakes form C.	

River Systems (pp. 318–319)

1. How do rivers begin?

Rivers begin when trickles of water run together over the ground and join in larger streams.

Match the term with its definition.

Term	Definition
<u> c </u> 2. tributary	a. A river and all its tributaries together
<u> a </u> 3. river system	b. The land area that supplies water to a river system
<u> b </u> 4. watershed	c. A smaller stream or river that feeds into a main river
<u> d </u> 5. divide	d. The ridge that separates one watershed from another

Ponds (pp. 320–321)

6. When do ponds and lakes form?

They form when water collects in hollows and low-lying areas.

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Surface Water (continued)

7. Circle the letter of each sentence that is true about ponds.

- a. Ponds provide only one type of habitat.
- b. All ponds exist year-round.
- c. Algae are the basic food producers in ponds.
- d. Pond animals include fish.

8. Circle the letter of the sentence that explains why plants grow throughout a pond.

- a. Pond water is shallow.
- b. Animals live throughout a pond.
- c. A pond is muddy on the bottom.
- d. Algae grow in a pond.

The sunlight reaches the bottom - photosynthesis can occur.

Lakes (p. 322)

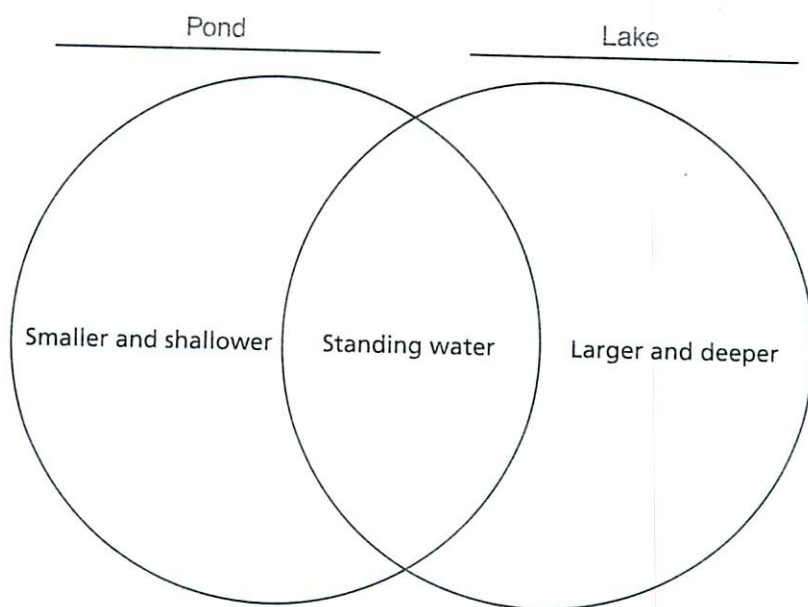
9. Is the following sentence true or false? Lakes form in many ways.
true

10. Circle the letter of the sentence that explains how Lake Victoria in central Africa formed.

- a. A river meander was cut off to form an oxbow lake.
- b. Movements in Earth's crust created a valley that filled with water.
- c. Lava from a volcano dammed up a river and formed a lake.
- d. An empty volcanic crater filled with water.

11. A lake that stores water for human use is called a(n) _____ reservoir.

12. Complete the Venn diagram by labeling each circle.



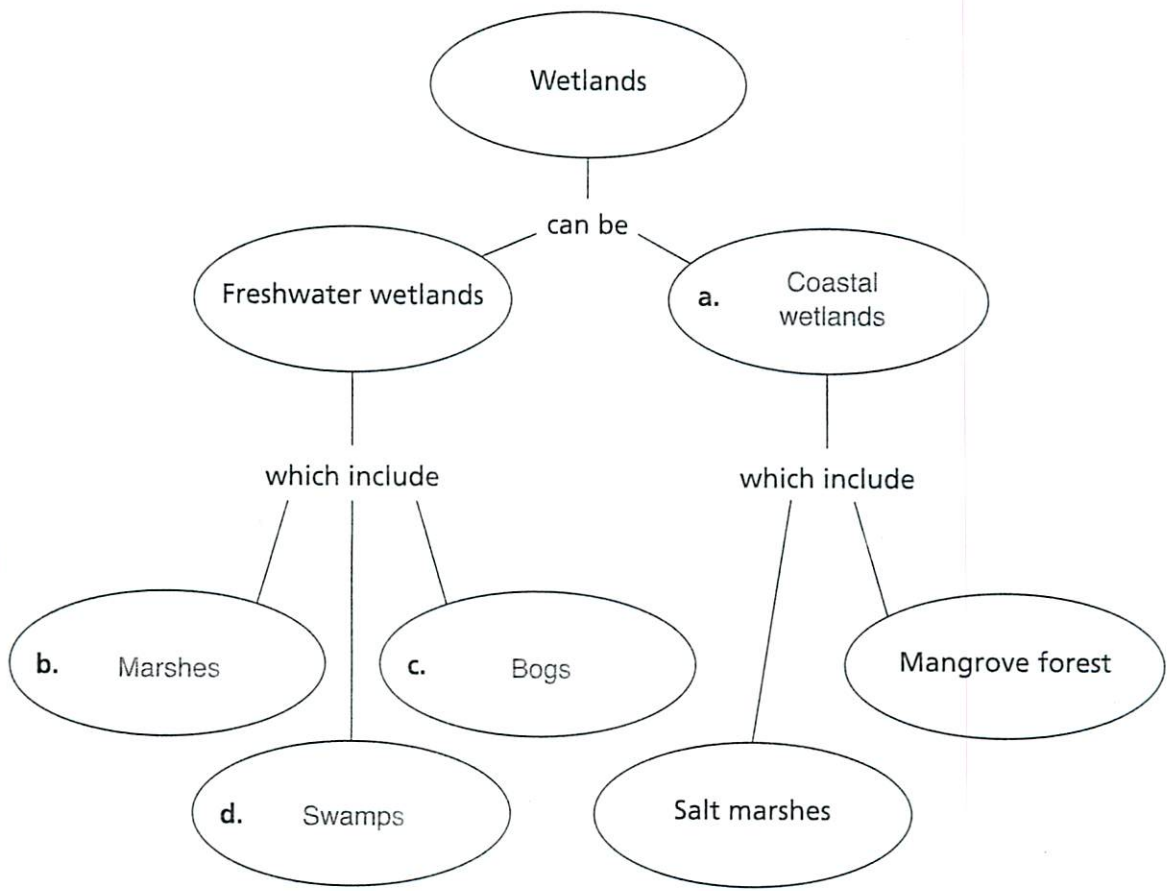
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Wetlands (pp. 323–325)

13. Circle the letter of each sentence that is true about a wetland.

- (a.) It is an area of land covered with shallow water.
- (b.) It can be small or large.
- (c.) It may dry up in the summer.
- (d.) It may form where groundwater seeps onto the surface.

14. Complete the concept map.



Match the type of wetland with its description.

Type of Wetland	Description
<u> c </u> 15. marsh	a. It has trees and shrubs growing in the water.
<u> a </u> 16. swamp	b. It has tall, strong grasses and a rich, muddy bottom.
<u> e </u> 17. bog	c. It has cattails, rushes, and other tall grasslike plants.
<u> b </u> 18. salt marsh	d. It has short trees with a thick tangle of roots.
<u> d </u> 19. mangrove forest	e. It has acidic water and mosses.

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Surface Water (continued)

20. Circle the letter of each sentence that is true about the Everglades.

- a. The water in the Everglades does not flow.
- b. No trees grow in the Everglades.
- c. Many rare and endangered species live in the Everglades.
- d. The Everglades are a fragile environment.

21. How has development affected the water in the Everglades?

Development has polluted and changed the flow of water in the Everglades.

The Everglades are wetlands - salt water marsh

22. Circle the letter of each sentence that is true about wetland habitats.

- a. They have sheltered waters.
- b. They provide a poor supply of nutrients.
- c. They have very different animal life from other freshwater habitats.
- d. They have many temporary residents. *animals.*

23. Circle the letter of each choice that is a natural function of wetlands.

- a. Helping control floods
- b. Filtering water
- c. Trapping silt and mud
- d. Providing farmland

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Water Underground (pp. 326–331)

This section explains how water moves underground from the surface and how underground water is stored in rock layers. The section also describes how underground water moves back to the surface.

Use Target Reading Skills

Before you read, preview the figure, "Springs and Wells." Then write questions that you have about the diagram. As you read, answer your questions.

Springs and Wells

Q. What is an artesian well?
A. It is a well in which water rises because of pressure within an aquifer.
Q. Where does the water that supplies a well come from?
A. Underground water comes from precipitation that trickles down between particles of soil through cracks and spaces in layers of rock.

How Water Moves Underground (pp. 326–327)

- Underground water comes from precipitation.
- Precipitation that soaks into the ground trickles downward due to gravity.

Match the term with its definition.

Term

- a 3. permeable
- c 4. impermeable
- b 5. saturated zone
- e 6. water table
- d 7. unsaturated zone

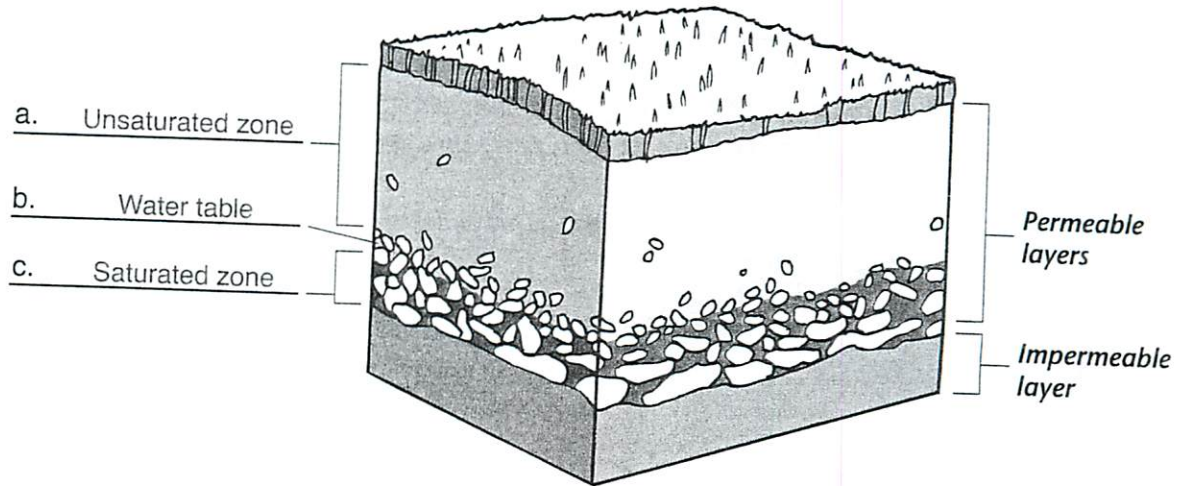
Definition

- a. Allows water to pass through
- b. Area that is totally filled with water
- c. Does not let water pass through
- d. Layer above the water table
- e. Top of the saturated zone

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Water Underground (continued)

8. In the drawing, label the water table and the saturated and unsaturated zones.



9. Places where groundwater bubbles or flows out of cracks in the rock are called _____ springs _____.

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10. Any underground layer of rock or sediment that holds water is called a(n) _____ aquifer.
11. Circle the letter of each sentence that is true about aquifers.
- a. All of them are very large.
 - b. They can provide drinking water.
 - c. They can provide water for crops.
 - d. They contain moving water.

Bringing Up Groundwater (pp. 328–331)

12. Is the following sentence true or false? The depth of the water table is ~~not~~ always the same, even over a large area of land.
_____ ~~false~~ true
13. Circle the letter of the choice that best explains how to get water from an aquifer with a well.
- a. By drilling below the water table
 - b. By drilling below the aquifer
 - c. By drilling through impermeable rock
 - d. By drilling near a dry well
14. A well in which water rises because of pressure within an aquifer is called a(n) _____ artesian well.
15. A type of hot spring from which the water bursts periodically into the air is called a(n) _____ geyser.

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Using Freshwater Resources (pp. 334–341)

This section explains how the supply of water and the demand for water can change. The section also describes ways to conserve water and new ways of obtaining fresh water that may be used in the future.

Use Target Reading Skills

Before you read, write what you know about water conservation. As you read, write what you learn. Accept all logical answers.

What You Know
1. I can conserve water by taking shorter showers.
2. Reducing water use helps conserve water.
3. People often use more water than they need.

What You Learned
1. Recycling and reusing water are two more ways to conserve water.
2. For every minute I shower, I use 18 liters of water.
3. Agriculture accounts for the highest consumption of water in the United States.

How People Use Water (pp. 335–337)

1. Is the following sentence true or false? Water is a ~~non~~ renewable resource. false true

2. When does a water shortage occur?

A water shortage occurs when there is too little water, too great a demand, or both.

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3. The process of supplying water to areas of land to make them suitable for growing crops is called irrigation.

4. Circle the letter of each sentence that is true about the ways people use water.

- a. Industries use water in many ways.
- b. Some farmland must be irrigated.
- c. Water can never be used faster than precipitation can replace it.
- d. Water can be used for recreation.

5. Why are many cities in the United States located on coasts?

The rivers provide a water source for drinking water and for transportation.

Conserving Water (pp. 338–339)

6. Using a resource wisely so that it will not be used up is called conservation.

7. Circle the letter of each choice that helps conserve water in the home.

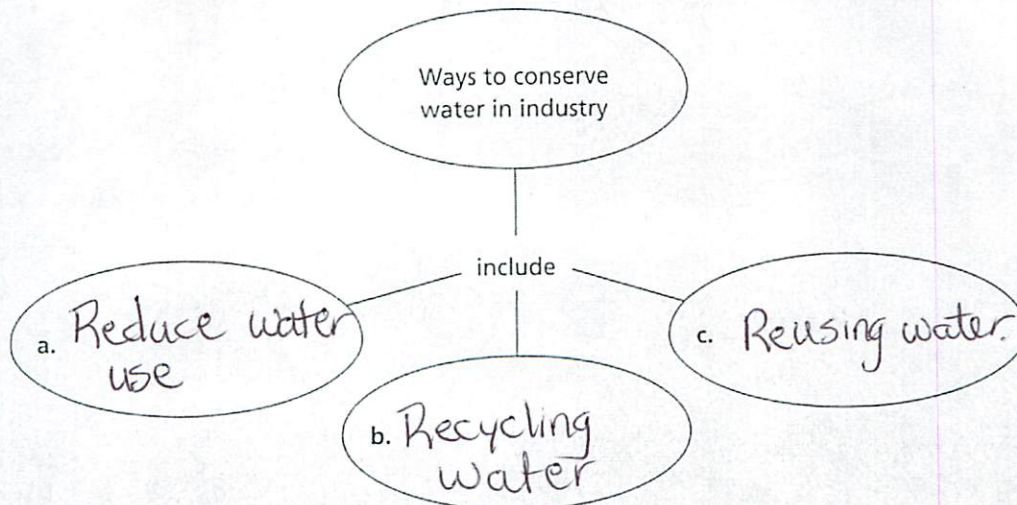
- a. Taking shorter showers
- b. Watering the lawn around noon instead of early or late in the day
- c. Keeping a pitcher of drinking water in the refrigerator
- d. Running the washing machine only when you have small loads

8. Is the following sentence true or false? In the United States, the biggest use of water is for agriculture. true

9. How do sprinkler and drip irrigation systems help conserve water?

They help conserve water by reducing evaporation.

10. Complete the concept map.



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Using Freshwater Resources (continued)

What Is Pollution? (pp. 340–341)

11. The addition of any substance that has a negative effect on water or the living things that depend on water is called _____ water pollution.
12. Circle the letter of each sentence that is true about water pollution.
- a. It can affect surface water.
 - b. It cannot affect groundwater.
 - c. It results from human activities.
 - d. It does not result from natural causes.
13. The substances that cause pollution are called _____ pollutants.
14. A specific source of pollution that can be identified is a _____ point source.
15. A widely spread source of pollution that can't be tied to a specific point of origin is a _____ nonpoint source.
16. Circle the letter of each choice that is an example of how people can prevent or clean up pollution.
- a. Using sand instead of salt on roads in winter
 - b. Placing septic tanks for homes away from freshwater sources
 - c. Allowing factories to dump hot water into a river
 - d. Having hazardous waste collection days to discourage people from dumping pollutants down drains