

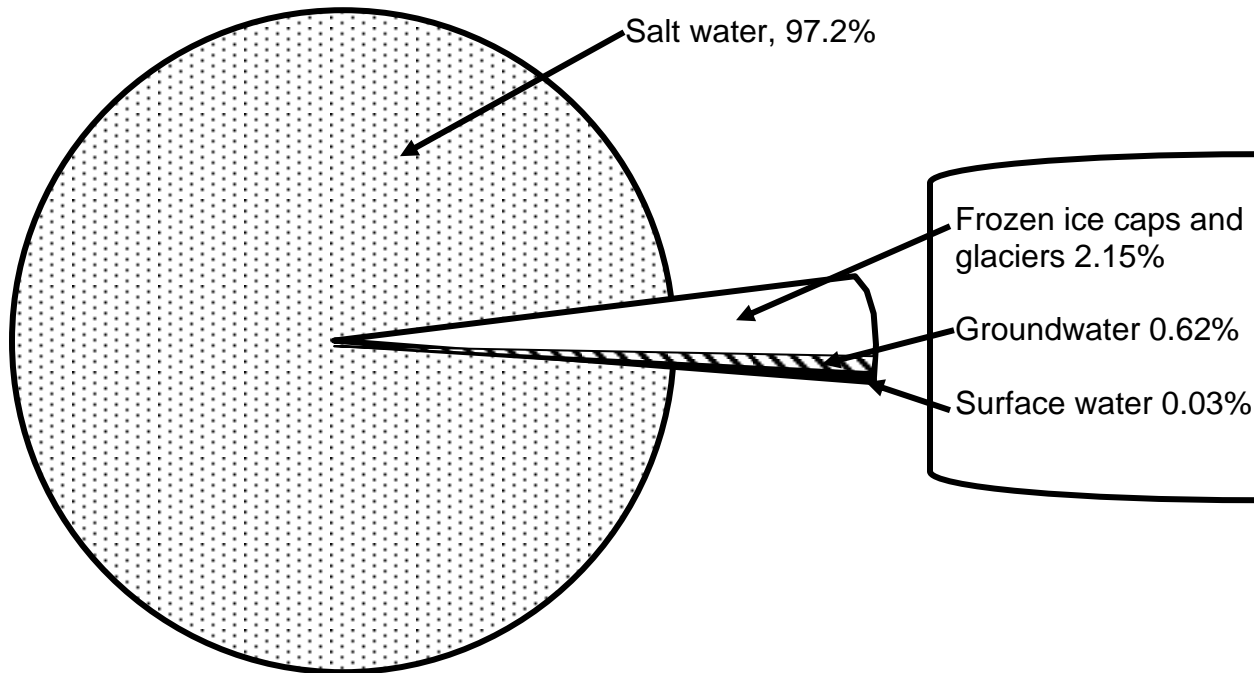
Name _____

Date _____

Water, Water—Everywhere!

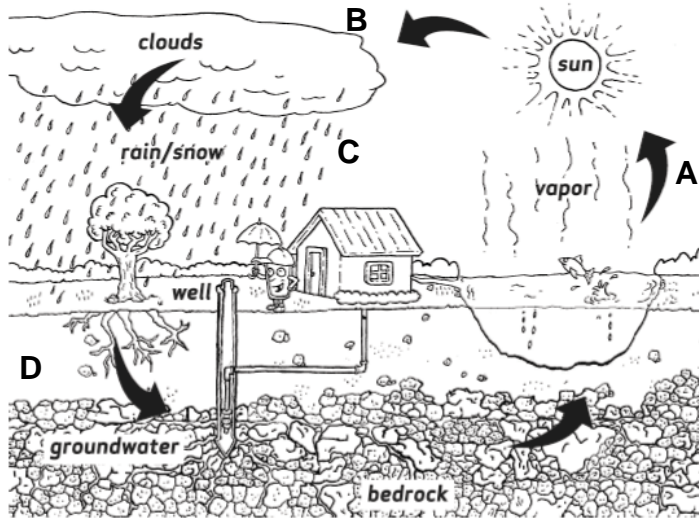
Key Words		
atmosphere	carbon dioxide	condensation
evaporation	glacier	groundwater
ice caps	oxygen	photosynthesis
precipitation	surface water	water
water cycle	water vapor	

About $\frac{3}{4}$ of the Earth's surface is covered with **water**. Almost all of this water is saltwater. Most of that saltwater is in the oceans. Less than 3% of Earth's water is fresh water. Most of that fresh water is frozen in ice caps and glaciers. **Ice caps** are thick sheets of ice that cover areas around the North and South Poles. **Glaciers** are slow-moving rivers of ice. Less than 1% of Earth's water is liquid fresh water. Liquid fresh water is found in groundwater and surface water. **Groundwater** is water that collects underground. **Surface water** includes lakes, ponds, rivers, and streams. A very tiny percentage of Earth's freshwater is in the form of water vapor in the **atmosphere** (the air that surrounds Earth).



The water that you drink today is the same water that has been on Earth for millions of years. Water is constantly recycled through the environment in the **water cycle**. Water goes through three main processes during the water cycle: **evaporation**, **condensation**, and **precipitation**.

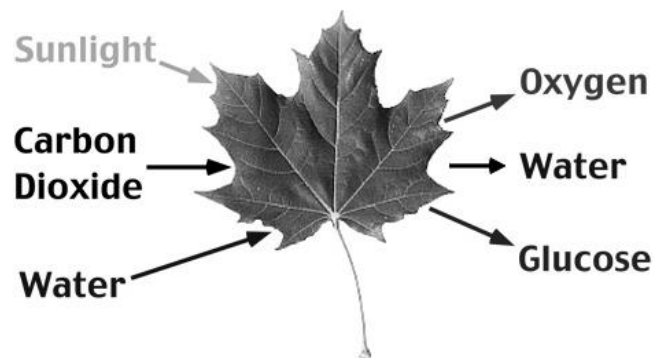
Heat from the sun causes water to evaporate (change from a liquid to a gas called **water vapor**). The water vapor rises into the atmosphere and cools. When it cools, the water vapor condenses (changes from a gas to a liquid). The water droplets formed when the water vapor condenses clump together to form clouds. When the water droplets in the clouds become large and heavy, gravity pulls them to the ground as some form of precipitation: rain, snow, sleet or hail. Precipitation is any form of water that falls naturally from the clouds.



Water Cycle Diagram

- A** Heat from the sun causes surface water to evaporate.
- B** As the water vapor rises and cools, it condenses to form clouds.
- C** When the water drops in the clouds get heavy enough, gravity pulls them to the ground in some form of precipitation.
- D** Some of the precipitation soaks into the ground becoming groundwater; some evaporates immediately, and some runs off into streams, rivers, lakes and oceans as surface water.

Water also enters the atmosphere from plants during the process of **photosynthesis**. The leaves of plants make food from the sun's energy. This process is called photosynthesis. Tiny pores in the bottom of the leaves absorb carbon dioxide from the air and release oxygen and water vapor. Inside the leaves, sunlight is mixed with the carbon dioxide to produce a type of sugar called glucose. The plant uses this sugar as food. During photosynthesis, the plant releases water and oxygen as waste products.



1. Through what process are clouds formed?
 - A Condensation
 - B Evaporation
 - C Precipitation
 - D Run-off

2. What is the energy source that drives the water cycle?
 - A Electrical energy
 - B Energy from plants
 - C Energy from the sun
 - D Hydroelectric energy

3. Boiling can also cause water to evaporate. A student poured some water in a pan. He used a thermometer to measure the water's temperature. It was 25°C. If he heats the water to its normal boiling point, how many degrees must the temperature of the water increase?
 - A 25°
 - B 50°
 - C 75°
 - D 100°

4. In what part of the plant does photosynthesis take place?
 - A Flower
 - B Leaves
 - C Stems
 - D Roots

5. What is the main source of energy that warms air and causes evaporation and wind throughout the world?
 - A Forest fires
 - B The sun
 - C Power plants
 - D Warm-blooded animals

6. Which of the following is an example of evaporation?
 - A A person sweating
 - B Rain falling from a cloud
 - C A puddle drying up
 - D A cloud being formed

7. What covers more than half of the Earth's surface?
 - A Deserts
 - B Forests
 - C Prairies
 - D Oceans

8. During photosynthesis, a plant takes in carbon dioxide, sunlight and water to produce its own food. What is the main waste product that the plant leaf releases during photosynthesis?
 - A Oxygen
 - B Nitrogen
 - C Carbon
 - D Oxide

Part 2: Match the terms that describe each other.

- | | |
|--------------------------------|----------------------------------|
| 9. _____Groundwater | A. water falling from clouds |
| 10. _____Surface water (fresh) | B. plants produce their own food |
| 11. _____Surface water (salty) | C. ice caps and glaciers |
| 12. _____Frozen water | D. gas plants need to survive |
| 13. _____Evaporate | E. underground water |
| 14. _____Condense | F. recycling of water |
| 15. _____Precipitation | G. change from liquid to gas |
| 16. _____Water vapor | H. the air surrounding Earth |
| 17. _____Atmosphere | I. oceans |
| 18. _____Carbon dioxide | J. change from gas to liquid |
| 19. _____Water cycle | K. water in its gaseous state |
| 20. _____Photosynthesis | L. lakes and streams |
21. In the space below, use your knowledge of the water cycle to explain how Houston gets rain. Be sure to use the following words or some form of these words: evaporation, condensation, precipitation, runoff, water, and water vapor.

ground water	glacier
evaporation	condensation
water vapor	ice caps
precipitation	surface water
atmosphere	water cycle

\$1,500

\$100

\$2,000

\$2,500

\$200

\$400

\$300

\$1000

\$5,000

\$7,000

carbon dioxide	photosynthesis
oxygen	waste products
atmosphere	producers
water vapor	leaves
solar energy	plants

\$1,000

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\$1,500

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\$400

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\$5,000

\$300

\$100

Word Bank, Set 1		Word Bank, Set 2	
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condensation	precipitation	Carbon dioxide	producers
evaporation	surface water	leaves	solar energy
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