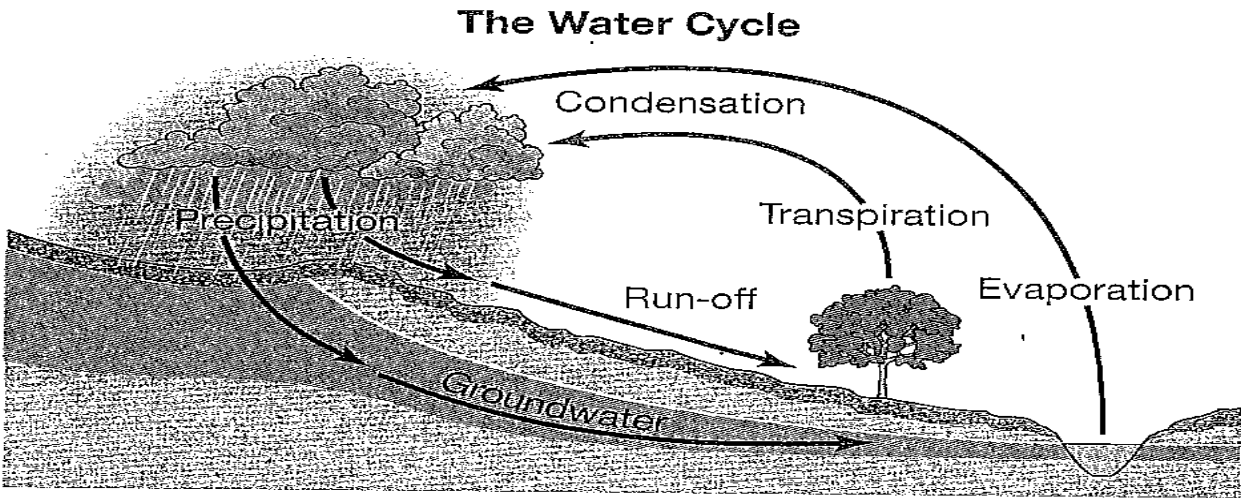


The Water Cycle

Water is a renewable resource that is naturally recycled. Recall from Lesson 6 that the **water cycle** is the cycling of water among Earth's water bodies, atmosphere, and land. You might also think of it as the constant movement of water between Earth and the atmosphere. The illustration below summarizes the water cycle.



Water leaves Earth's surface and enters the atmosphere through the processes of evaporation and transpiration. **Evaporation** is the process by which water changes from a liquid to a gas, called water vapor. When warmed by the Sun, water evaporates from oceans and lakes. **Transpiration** is the process by which water evaporates through openings in plant leaves.

Water returns from the atmosphere to Earth's surface through condensation and precipitation. **Condensation** is the process during which water loses heat energy and changes from a gas to a liquid. Warm water vapor in the atmosphere rises, cools, and condenses into droplets that make up clouds. When the droplets become heavy enough, they fall as precipitation. **Precipitation** is water that falls from the atmosphere to the ground in the form of rain, snow, sleet, or hail.

When precipitation falls to the ground, it can move into the ground to become groundwater. Or it can fall right into bodies of water like lakes and oceans. It can also flow over the surface as run-off. Eventually, run-off and groundwater flow downhill under gravity into rivers, lakes, and oceans. When this surface water warms up and evaporates, the cycle begins all over again.

The Water Cycle Quiz

1. What is the water cycle?
 - a. Constant movement of water between the Earth and Moon
 - b. Constant movement of water between the atmosphere and earth
 - c. Constant movement of water between the atmosphere and hydrosphere
 - d. Constant movement of water between the hydrosphere and biosphere
2. Which of these makes up most of Earth's water?
 - a. Oceans
 - b. Rivers
 - c. Lakes
 - d. Glaciers
3. Where is most of the fresh water on Earth located?
 - a. In the oceans
 - b. In polar ice caps
 - c. In rivers and streams in groundwater
4. What are land area that remain moist for all or part of the year called?
 - a. Glaciers
 - b. Watersheds
 - c. Wetlands
 - d. Aquifers
5. How does water move from Earth's surface to the atmosphere?
 - a. Evaporation
 - b. Condensation
 - c. Precipitation
 - d. Groundwater
6. What happens to water once it moves from Earth's surface to the atmosphere?
 - a. Rises, cools, condenses, and expands to form a cloud
 - b. Rises, expands, condenses, and then cools, to form a cloud
 - c. Rises, expands, cools, and condenses to form a cloud
 - d. Cools, then rises, expands, and condenses to form a cloud
7. How does water move from the atmosphere to Earth's surface?
 - a. Evaporation
 - b. Condensation
 - c. Groundwater
 - d. Precipitation
8. How does precipitation that falls on land enter bodies of water?
 - a. By runoff &/or ground water
 - b. By Evaporation
 - c. By runoff only
 - d. By ground water only

9. What is the source of energy that drives the water cycle?

- a. Moon
- b. Sun
- c. Earth
- d. Superman

10. Why is the water cycle important?

- a. It's a continuous cycle of water which is important to filtering dirt out of the water
- b. It's a continuous cycle of water which is important to plants only
- c. It's a continuous cycle of water which is important in blocking solar radiation from hitting the ground
- d. it's a continuous cycle of water which is important to substance to life

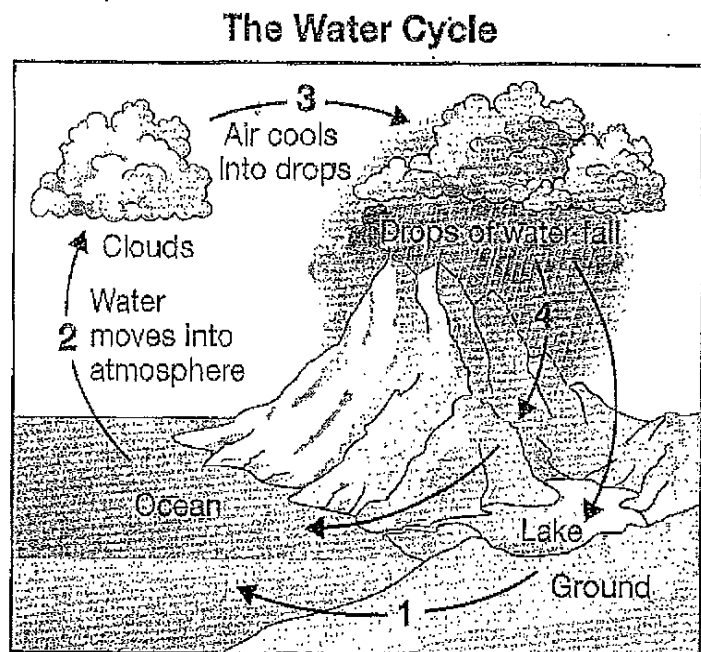
Bobby prepared a poster on the water cycle for his school's science fair. His poster includes the diagram below.

11. Which term could Bobby have used to label the process shown in step 3 of his diagram?

- a. Evaporation
- b. Condensation
- c. Transpiration
- d. Precipitation

12. Which energy conversion occurs in order for ocean water to move into the atmosphere in step 2?

- a. Light energy to potential energy
- b. Heat energy to light energy
- c. Light energy to chemical energy
- d. Chemical energy to electrical energy



13. Which step in Bob's diagram represents water flowing as groundwater?

- a. 4
- b. 3
- c. 2
- d. 1

14. Which term BEST describes the water moving in step 4 of Bobby's diagram?

- a. Run-off
- b. Precipitation
- c. Water vapor
- d. Salt water

Writing prompt. Answer BOTH questions on the scantron

In the water cycle, water moves back and forth between Earth and the Atmosphere.

15. Identify and describe a process that moves water from Earth's surface to the atmosphere.

16. Identify and describe one way water moves from the atmosphere to Earth's surface or one way water moves once it reaches Earth's surface.