

What You Will Learn

- Diagram the water cycle, and explain its importance to living things.
- Diagram the carbon cycle, and explain its importance to living things.
- Diagram the nitrogen cycle, and explain its importance to living things.

Vocabulary

evaporation decomposition
 condensation combustion
 precipitation

READING STRATEGY

Mnemonics As you read this section, create a mnemonic device to help you remember the parts of the water cycle.

7CS3 Students will have the computation and estimation skills necessary for analyzing data and following scientific explanations.

7CS3.c Apply the metric system to a scientific investigation that includes metric to metric conversion (i.e., centimeters to meters).

7CS4.a Use appropriate technology to store and retrieve scientific information in topical, alphabetical, numerical, and keyword files, and create simple files.

7CS6.c Organize scientific information using appropriate simple tables, charts, and graphs, and identify relationships they reveal.

7L4.a Demonstrate in a food web that matter is transferred from one organism to another and can recycle between organisms and their environments.

The Cycles of Matter

The matter in your body has been on Earth since the planet formed billions of years ago!

Matter on Earth is limited, so the matter is used over and over again. Each kind of matter has its own cycle. In these cycles, matter moves between the environment and living things.

The Water Cycle

The movement of water between the oceans, atmosphere, land, and living things is known as the *water cycle*. The parts of the water cycle are shown in **Figure 1**.

How Water Moves

During **evaporation**, the sun's heat causes water to change from liquid to vapor. In the process of **condensation**, the water vapor cools and returns to a liquid state. The water that falls from the atmosphere to the land and oceans is **precipitation**. Rain, snow, sleet, and hail are forms of precipitation. Most precipitation falls into the ocean. Some of the precipitation that falls on land flows into streams, rivers, and lakes and is called *runoff*. Some precipitation seeps into the ground and is stored in spaces between or within rocks. This water, known as *groundwater*, will slowly flow back into the soil, streams, rivers, and oceans.

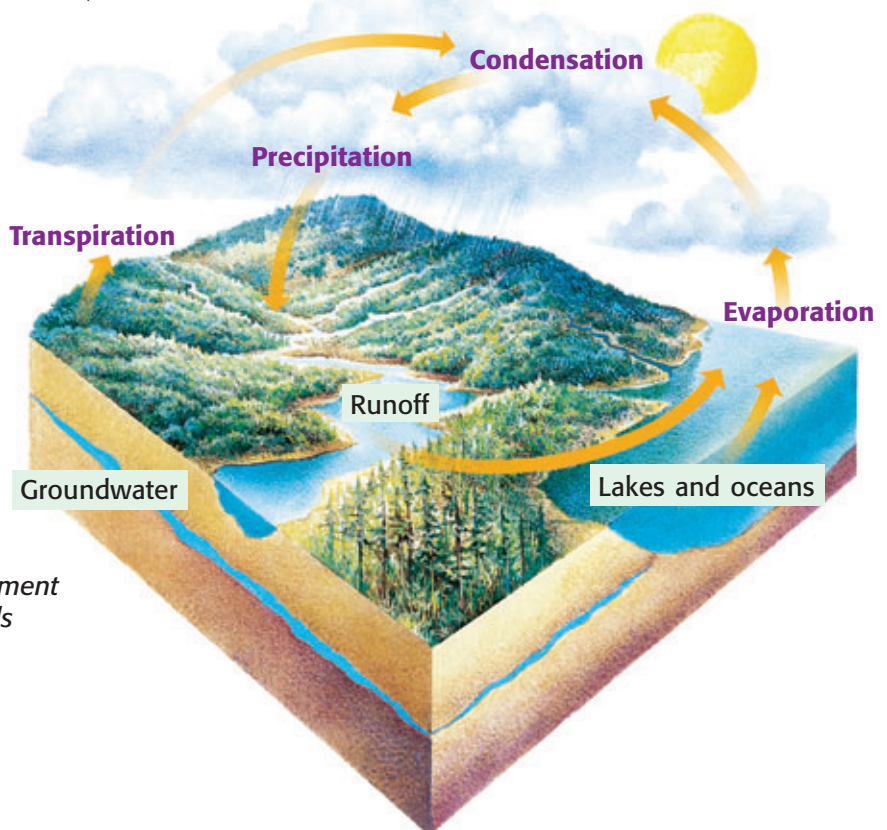


Figure 1 Water from the environment moves through plants and animals and back to the environment.