

SECTION 1-3**SECTION SUMMARY**

The Water Cycle

1**Guide for Reading**

- ◆ How does Earth's water move through the water cycle?
- ◆ In what ways do living things depend on the water cycle?

Water on Earth is naturally recycled through the water cycle. The **water cycle** is the continuous process by which water moves through the living and nonliving parts of the environment. **Water moves from bodies of water, land, and living things on Earth's surface to the atmosphere and back to Earth's surface.** The sun is the source of energy that drives the water cycle.

The water cycle has no beginning and no end. It includes three main processes: evaporation, condensation, and precipitation. Large amounts of water evaporate constantly from oceans, lakes, and rivers. A significant amount of water vapor is given off through the leaves of plants in a process called **transpiration**.

Once evaporation occurs, warm air carries the water molecules high into the atmosphere. Higher up, the air tends to be much colder. Cold air holds less water vapor than warm air. As a result, water vapor condenses into droplets, which clump around dust particles, forming clouds.

Water droplets in a cloud grow larger and eventually become so heavy that they fall back to Earth. Water that falls to Earth as rain, snow, sleet, or hail is called **precipitation**. Most precipitation falls directly into the oceans.

Some water that falls on land evaporates immediately. Some runs off the surface into rivers, lakes, and oceans. Some sinks into the ground and becomes groundwater. Once groundwater reaches the surface, it can continue through the cycle by evaporating again. Before returning to the atmosphere, some water also passes through living things.

Precipitation is the source of all fresh water on and below Earth's surface. The water cycle renews the usable supply of fresh water on Earth. For millions of years, the total amount of water on Earth has remained fairly constant. In the world as a whole, the rates of evaporation and precipitation are balanced.