



# 1.5 Waters of the Earth

**Main Idea** Water is essential for all forms of life on Earth.

The Mississippi River begins as a small stream in northern Minnesota. More than 2,000 miles south, it pours more than 4.7 million gallons of water per second into the Gulf of Mexico. Water flowing in rivers like the Mississippi is **essential**, or necessary, for all forms of life.

## Fresh Water

The Mississippi River contains fresh water. People use fresh water to drink, cook, bathe, and irrigate crops. Early civilizations developed along rivers such as the Nile River in Egypt because of the available fresh water.

Different bodies of fresh water exist for different geographic reasons. A river is a path of water that flows from a higher elevation to a lower elevation. Streams, brooks, and creeks are like rivers, but smaller. A lake is a large body of water that is surrounded by land.

## Salt Water

Salt water contains salt and other minerals. It is a major source of the world's seafood supply and a means of transportation. Oceans are large bodies of salt water. Earth's four oceans are the Atlantic, the Pacific, the Indian, and the Arctic. Continuously moving flows of water, called currents, circulate through the oceans and affect climates on land.

Seas are smaller bodies of salt water. The Red Sea, for example, lies between the Arabian Peninsula and eastern Africa.

## THE HYDROLOGIC CYCLE

The hydrologic cycle is the continual movement of water from Earth's surface into the air and back again.

### 2 CONDENSATION

During **condensation**, cooler temperatures in the atmosphere cause the water vapor to change into droplets that form clouds.

### 1 EVAPORATION

During **evaporation**, the sun heats the ocean, and water vapor rises up into the atmosphere.

## Before You Move On

**Monitor Comprehension** How is water essential for all life on Earth?



### 3 PRECIPITATION

The water droplets grow heavier and fall back to Earth in the form of **precipitation**, which is rain or snow.

### 4 RUNOFF

Precipitation soaks into the ground and runs into rivers, underground water reservoirs, and, eventually, the ocean.

#### WORLD'S LONGEST RIVERS

River	Location	Length (miles)
Nile	Africa	4,241
Amazon	South America	4,000
Chang Jiang (Yangtze)	Asia	3,964
Mississippi-Missouri	North America	3,710
Yenisey-Angara	Asia	3,440

Source: *National Geographic Atlas of the World*, 8th ed.

#### ONGOING ASSESSMENT

### DATA LAB

Geographical Skills

- 1. Interpret Charts** According to the chart, which continent has two of the longest world rivers, and what are they? How do you think the two rivers have affected that continent?
- 2. Interpret Models** How does the hydrologic cycle explain why rivers and lakes do not run out of water?
- 3. Location** St. Louis, Missouri, is located just south of where the Missouri River flows into the Mississippi River. Why is this a good location for a major city?