

Bodies Of Water: Rivers

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The Amazon is the world's largest river by volume. It flows through the Amazon rain forest. Photo from: Neil Palmer, International Center for Tropical Agriculture

A river is a large natural stream of water that flows over land. Even though rivers hold only a tiny fraction of Earth's water, they have always been essential to human civilization. Rivers carry freshwater to people, plants and animals. They provide people with a method of transport and water power. They also shape the land by carving out valleys and canyons.

How Rivers Flow

A river begins as a tiny trickle of water on high ground. The water may come from rainfall, from melting snow or ice, or from underground through a spring. As the trickle runs downhill, it combines with other trickles. It may be called a stream, a brook or a creek.

Eventually the creek grows into a river. In its upper course the river flows quickly. It cuts through the land and picks up soil and gravel. The moving water and the material it carries wear away even more rock and soil. Over many years, the river creates canyons and deep valleys. The changes a river can make in Earth's surface can be seen in the Grand Canyon, formed by the Colorado River in the United States. They can also be seen in the great gorge of the Zambezi below Victoria Falls in Africa.



In its middle course the river flows down gentler slopes. It gets larger and slower. Soil, gravel and sand begin to sink to the bottom. Some of this material builds up to form sandbars and islands.

In its lower course the river flows even more slowly. It drops still more solid material. Some material is carried all the way to the mouth, the place where the river enters the sea. This material may build up to form a piece of land called a delta.

River Systems

A river receives water from the smaller streams that flow into it. These streams are called tributaries. A river and its tributaries make up a river system. The area that a river system covers is called a basin. Some rivers have very large basins while others of equal length have much smaller basins. The world's two longest rivers are the Amazon and the Nile. They are both about the same length, but the basin of the Amazon is more than twice as large as the basin of the Nile.



Rivers And Human Life

Rivers have always been of great use to humans. The earliest civilizations all developed near rivers. The rivers provided early humans with water to drink and fish to eat. When people learned to build and use boats, rivers supplied a cheap and easy way to travel. Floodplains provided fertile soil for crops. The system called irrigation allowed people to use rivers to water their fields.

People still depend on rivers for much of their water supply. Cities need huge amounts of water every day for use in homes and factories. Large riverboats called barges still carry grain, coal and minerals. In many places rivers are used to produce electric power. Hydroelectric dams use the swift flow of rivers to create great amounts of electricity. Dams are also used to control the flow of rivers. They can prevent flooding, which causes problems for people who live near rivers.



Some human activities are harmful to rivers. For example, large factories built alongside rivers use enormous amounts of water for cooling and other purposes. Then they return the water to the river at overheated temperatures. This hot water disturbs the ecology of the river and kills fish. Industries also dump harmful chemical waste into rivers. Cities near rivers contribute to the problem by releasing their wastes into the water.

Pollution does not just affect the creatures that live in the water. When people eat fish taken from polluted streams, the pollution passes into their bodies. This can cause cancer and other health problems.

Quiz

1 One MAIN idea of the article is that rivers are large streams that flow over the land.

What is another MAIN idea of the article?

- (A) Rivers are only a small fraction of the world's water.
- (B) Rivers can start from rainfall or some melting ice.
- (C) Rivers flow into the sea at a place called the mouth.
- (D) Rivers shape the land by creating canyons and valleys.

2 Which sentence from the article would be MOST important to include in a summary of the article?

- (A) As the trickle runs downhill, it combines with other trickles.
- (B) In its middle course the river flows down gentler slopes.
- (C) In many places rivers are used to produce electric power.
- (D) Some of this material builds up to form sandbars and islands.

3 Read the following selection from the section "River Systems."

Some rivers have very large basins while others of equal length have much smaller basins. The world's two longest rivers are the Amazon and the Nile. They are both about the same length, but the basin of the Amazon is more than twice as large as the basin of the Nile.

Which answer choice BEST describes the structure of that section?

- (A) cause and effect
- (B) compare and contrast
- (C) problem and solution
- (D) question and answer

4 Read the article's introduction [paragraph 1] and the final section.

What is the connection between those two sections?

- (A) The introduction describes what a river is and how it affects people; the final section describes how both rivers and people affect one another.
- (B) The introduction explains how both rivers and people affect one another; the final section describes how rivers shape the land and affect people.
- (C) The introduction describes how rivers shape the land and affect people; the final section explains how rivers form and how people affect rivers.
- (D) The introduction explains how rivers form and how people affect rivers; the final section describes what a river is and how it affects people.