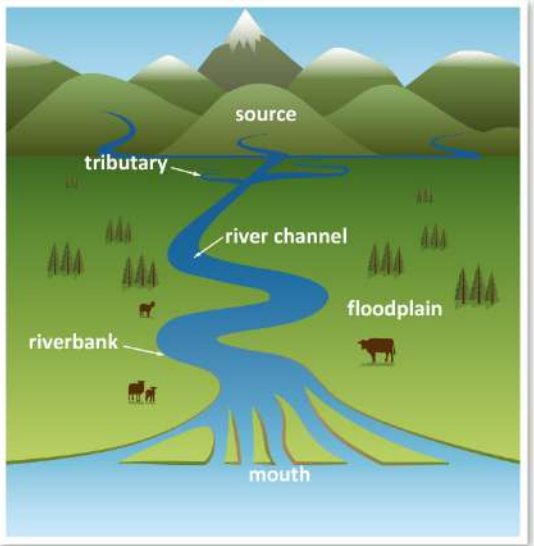
Flow

Parts of a river



source	The place where a river starts.
tributary	A river or stream that flows into a larger river.
river channel	A route along which water travels.
floodplain	An area of flat land next to a river that floods when the river is too full.
riverbank	The land at the edge of a river.
mouth	The end of a river, where the water flows into a sea or lake.

Physical features of rivers

Meander
A meander is a bend in a river or stream. It is formed when fast-flowing water erodes the riverbank and deposits silt and mud inside a bend.

Oxbow lake
An oxbow lake is a lake that was once a meander in a river. The bend is cut off when the river finds an easier, straighter course to follow.

Waterfall
A waterfall is water that falls from a higher to a lower level. Waterfalls form when water flows from hard rock to soft rock. The water erodes the soft rock at the bottom of the waterfall and leaves a ledge of hard rock over which the water flows.

V-shaped valley
A V-shaped valley is a valley formed when a river erodes an area of soft rock. The steep sides are created when the edges of the river erode and collapse.

Interlocking spurs
Interlocking spurs are ridges of hard rock. They are similar to V-shaped valleys but the river water has been forced to weave from side to side because the rock is hard to erode.

Aquatic plants

Aquatic plants have adapted to live in water. Some live on the surface of the water while others live underwater.

The **water lily** has large flower heads and flat leaves that float on the water's surface. Its long stems and roots anchor the plant to the bottom of the pond.

Canadian pondweed has floppy stems that move with the current of the water. It absorbs water, nutrients and gases through its leaves.


water lily


Canadian pondweed

World rivers

Name of river	Continent	Length
Nile	Africa	6650km
Amazon	South America	6500km
Yangtze	Asia	6300km
Mississippi	North America	3766km
Volga	Europe	3530km
Ganges	Asia	2510km

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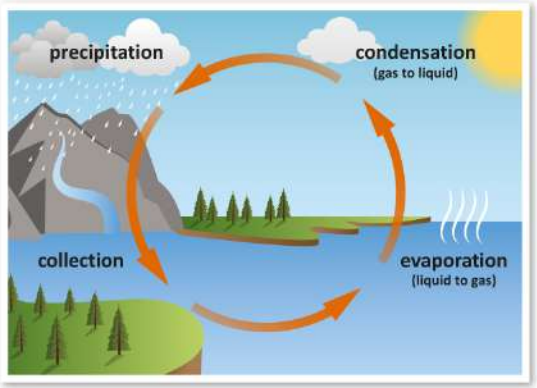
Water cycle

Water cannot be made. It is constantly recycled through a process called the water cycle. Water in seas, oceans, rivers and lakes is heated by the Sun and evaporates to form water vapour that rises into the air. The water vapour condenses as it cools and changes back into tiny drops of water, forming clouds. The clouds get blown over high ground, where the water falls back to Earth as rain, snow, sleet or hail, called precipitation. The rainwater runs off the land into rivers and streams and travels back to the sea. The cycle then starts again.



Water pollution

Water can become polluted by waste. Chemicals that farmers put on fields can get washed off into rivers and streams. These chemicals help algae to grow. Algae is a plant-like living organism that takes oxygen from the water so there is less for aquatic plants and animals to use. Plastic pollution is also a huge problem around the world. Plastic is man-made and doesn't degrade. Animals can die if they mistake plastic for food or become tangled in plastic fishing nets.

Using rivers

In the past, rivers provided food and fresh water for drinking and washing. Farmers grew crops near rivers because the soil was fertile. The power of flowing water was also used by machines, such as waterwheels, to make flour and wood pulp. Trade routes often used rivers to transport goods by boat. Rivers also provided a defensive barrier against invaders. Today, rivers are used for leisure activities such as fishing, canoeing and rowing.

Settlements near rivers

People have built settlements next to rivers for thousands of years because rivers can provide all the basic needs for life. Many towns and cities started as small settlements near rivers. London was built by the Romans next to the River Thames. York was built where two rivers, the Ouse and Foss, meet. The rivers provided protection, transport and fresh water.

Flooding and floodplains

The disadvantage of living next to a river is that rivers can flood. A floodplain is an area of low-lying, flat ground next to a river. If there is a lot of water in the river, it might spill over the riverbank and flood. In some cities, such as York, the river water regularly floods the surrounding area, including roads, businesses and homes.

Flooding in York

Glossary

aquatic	Refers to something that is growing, living or happening in water.
collection	The process of water gathering in oceans, rivers, lakes and streams.
condensation	The process of a gas cooling and changing into a liquid.
current	The movement of water, electricity or air in a certain direction.
degrade	The process of breaking down or decaying.
erosion	The process of soil and stone being gradually damaged and moved away by water, wind or rain.
evaporation	The process of a liquid heating up and changing into a gas.
fertile	Refers to soil that produces healthy crops because it contains nutrients.
flood	A large amount of water covering an area that is usually dry.
nutrient	A substance that plants or animals need to live and grow.
pollution	Damage caused to water, air or the environment by waste or harmful substances.
precipitation	Rain, snow, sleet or hail that falls to the ground from clouds.
sediment	Sand and silt that slowly form a layer of rock.
silt	Material carried by running water and deposited as a sediment.

Images from: Shutterstock editorial