

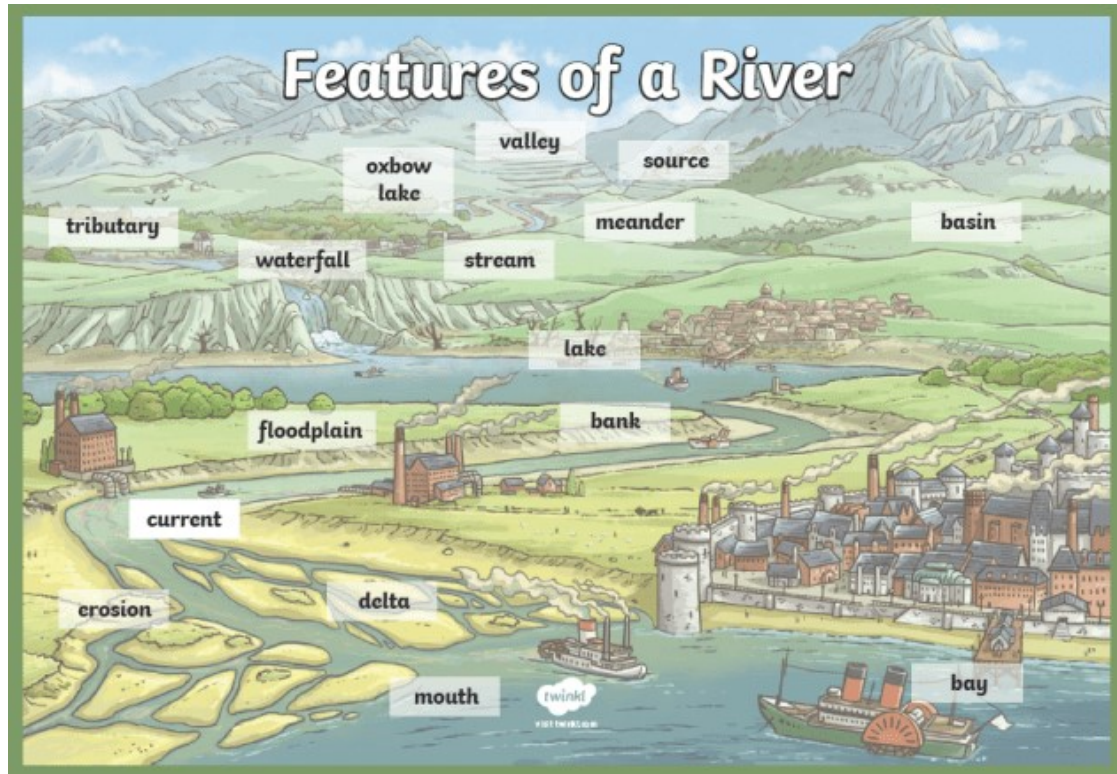


Your way to get along around the Globe. 1 ESO.
Prof. Ja Grimal.



WORLD-TREKKERS

Source Twinkl.es



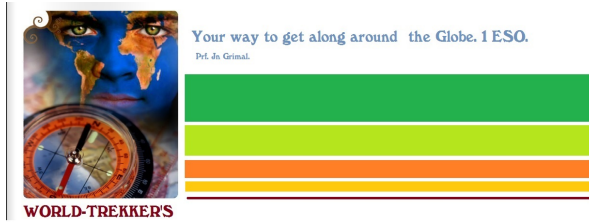
River

What is a river? Learn all about rivers and their features and explore rivers around the world. The page also includes river facts, such as what the start of a river is called.

What is a river?

A river is a flowing stream of water that leads to the sea, a lake or another river. The water is usually fresh, and rivers tend to begin as small streams that get larger the further they flow.

Some rivers flow all year round, whereas others only flow in certain seasons or if there's been a lot of rain. Rivers can be thousands of miles long, and they can form geological features of a landscape like valleys, gorges, and canyons. Perhaps the most incredible example of the impact that rivers can have on a landscape is the Grand Canyon.



Source Twinkl.es

While rivers are major features in a landscape, they only cover around 0.1% of land on Earth. They're essential to life for lots of animals, and throughout history, human civilizations have been built around the freshwater they provide. Most major cities in the world are situated on the banks of rivers. More than just a source of water, rivers have historically helped people obtain food, travel and transport goods, defend territory and more.

The Geography of a River

How are rivers formed?

No matter how big or small, all rivers have a starting point where the water begins its flow. This is called a **headwater**.

Rivers generally begin in upland areas. When rain water and melting snow collects on high ground, it begins to form little streams, which flow downhill because of gravity. These small streams, brooks, or creeks join together, becoming larger and larger until they form rivers.

The water shapes the landscape on its way down, eroding rock and carving out networks of valleys. When it reaches lower ground, rivers widen and take a more winding route, with most rivers eventually emptying out into the sea.

What are the three stages of a river?

The Upper Course

The source of a river is often a spring found on a hill, mountain, or glacier. The part of a river near the source is called a **young river**. Rain falling in highland areas flows downwards and collects in channels, forming a stream. As the stream continues to run downhill, it is joined by other streams and increases in size and speed. The point where two rivers join is called a confluence.



Your way to get along around the Globe. 1 ESO.
Prof. Ja Grimal.



Source Twinkl.es



Upper Course

Photo courtesy of Shutterstock (S) (i) (cc) - general under creative commons license - attribution

The Middle Course

Fast flowing water causes erosion as a river reaches its middle course, which makes it deeper and wider. The river erodes left and right, forming horse-shoe like loops called meanders.



Middle Course

Photo courtesy of Ken Beck, Evance (S) (i) (cc) - general under creative commons license - attribution



Source Twinkl.es

The Lower Course

In the lower course, a river is in flatland and flows slowly. The force of the water is lower than in the other stages, so the river deposits all the bits of eroded land it has been carrying with it.



Lower Course

What are the main parts of a river?

In the **upper course** of a river, you're likely to find:

- **Source** – Have you ever wondered what the start of a river is called? Well, wonder no more! The start of a river is called the source. The start of a river can also be called the headwaters! What's interesting about the start of a river is that, even if the water gets fast and powerful in the later stages, the source is usually quite calm. Often, the source of a river is a spring that comes from underground, or marshy areas that are fed into by snow. The source of a river can also range drastically in terms of size. For instance, it can be huge, with lots of smaller water sources flowing together. On the other hand, the source can also be tiny, with just a small amount of water coming in from a lake or pond. The start of a



Source Twinkl.es

river is very important and dictates the health of the river as a whole because anything that happens there, affects everything upstream.

- **Potholes** – Potholes are small holes found in the bedrock of a river bed. These holes are formed from sediment and other materials being carried by a river and scouring the river bed in the process.
- **V-shaped Valleys** – These valleys are formed by erosion from a river over time.
- **Interlocking Spurs** – Interlocking spurs are projecting ridges that extend alternately from the opposite sides of the wall of a young, V-shaped valley that a river flows down.
- **Waterfalls** – A waterfall is when a body of water makes a steep fall off a rocky ledge into a plunge pool below. This fall is from a great height. Another name for a waterfall is a cascade. Waterfalls are formed through the process of erosion.
- **Rapids** – The rapids are sections of a river where the water bed has a fairly steep gradient which causes the water to move very fast, especially over rocks.
- **Gorges** – A gorge is a narrow valley with steep, rocky walls that is located between hills or mountains.

In the middle course of a river, you're likely to find:

- **Floodplains** – Floodplains are areas of flat, low-lying ground formed mainly of river sediments. These areas are typically found next to rivers, lakes, and coastal waters that periodically flood when the water level is high. Floodplains play a key role in sustaining the plant and animal populations around them. They also benefit humans living nearby, as floodplains absorb the excess water that would otherwise travel downstream and flood the areas where people live.
- **Meanders** – The meanders of a river is the name given to the bends that the river takes. These bends are caused by the water chipping away at the soil on the outside of a river bend and placing it on the inside of the bend. This process happens slowly over time.
- **Oxbow lakes** – Oxbow lakes are U-shaped lakes that are created when a wide meander of a river is cut off and creates a freestanding body of water.



Source Twinkl.es

And in the lower course of a river, you're likely to find:

- **Large Floodplains** – Large floodplains are larger areas of low-lying ground formed mainly of river sediments.
- **Deltas** – The delta is the end of a river. It is in these large, silty areas that the water in the river slows down and splits off into various different channels. Deltas usually occur when a river meets an ocean, lake, or wetland.
- **Estuaries** – The estuary is the wide part of a river that meets the sea.
- **Levees** – The levee is an embankment designed to prevent flooding.



What is the start of a river called?

The start of a river is called the source. This is the place where the river begins its journey towards the sea. Rivers can have more than one source, and tributaries, where different strands of rivers and streams join together to form one river.

The start of a river is also sometimes called a headwater.

What is the bottom of a river called?



Source Twinkl.es

Rivers flow in channels. The bottom of a river is called the river bed, and the sides of the channel are called banks.

What's the end of a river called?

The end of the river is called the mouth. At the mouth, there's often a river delta, which is a large, silty area where the river splits into many slow-flowing channels. These channels often have muddy banks. The landform of a river delta is created by the deposition of sediment that the river has carried as the flow leaves the mouth and enters either an ocean, sea, estuary, lake, reservoir, or (less often) another river that can't carry away the sediment.

Where is a river fastest?

A river is normally fastest in the upper reaches.

Can a river have a beach?

Beaches can be found alongside rivers, and can be formed from sediment or eroded materials.

What is the valley of a river?

Valleys are low-lying areas of land between hills or mountains that rivers run through. River valleys are often V-shaped near the river's source, but become U-shaped and wider as the river gets closer to sea level.

Uses of Rivers

Rivers have a wide range of uses for animals, humans, and the environment. Some of these uses include:

Construction material



Source Twinkl.es

Rivers are home to a vast amount of coarse sediments, sand, and gravel that are vital materials for construction. In some circumstances, the use of these materials in construction can give way to new lake habitats as gravel pits fill back up with water. Alternatively, in other cases, the use of river materials for construction can harm and destabilise the riverbed and course of the river. It can also damage spawning fish populations that rely on stable gravel formations to lay their eggs.

Energy production

Fast-flowing rivers are a popular source of energy, through structures like watermills and hydroelectric plants. Whilst hydroelectric plants are a much more recent invention, there is evidence to suggest that watermills have been in use for hundreds of years. Before steam power was ever invented, watermills were also widely used for things like grinding cereal and processing wool and other textures. In recent years, with the increased need for sources of sustainable energy, there has been a rise in the development of large-scale power generation from water.

Food source

Rivers are a rich source of food for a wide range of species, and they have been since before the existence of recorded history. Rivers are full of edible aquatic life, such as fish, mussels, clams, etc. What's more, rivers are a huge source of fresh water, which is widely used for both drinking and irrigation. Rivers are also extremely useful for determining how urban areas like cities are structured, as they are often the focal point for urban renewal projects, such as river walks, and greenways. Moreover, rivers are used as a method of disposing of wastewater. In the past, they have also been used as a way to dispose of other waste (many countries in the developing world still use this method).