

Characteristics of Rivers

Upper Course

The source of the river is in the upper course. This is usually high up in the mountains and where there is a lot of rain.

- **Characteristics**—The river valley is a steep V shape, the gradient of the river is steep and the cross-profile is narrow and shallow.
- **Processes**—The river has lots of energy and erosion is the most dominant process.
- **Features**—You can find waterfalls in the upper course.

Middle Course

As the river moves into the middle course, there is a little less rainfall and the height above sea level reduces.

- **Characteristics**—The river valley becomes wider and the gradient is more gentle. The cross-profile of the river becomes wider and deeper too.
- **Processes**—Both erosion and deposition occur here. The bed load is also transported from the upper course to lower course.
- **Features**—You can find meanders in the middle course.

Lower Course

The final course of the river is the lower course, here the river reaches the sea. The end of the river is called the mouth.

- **Characteristics**—The river valley is very wide and flat. The gradient is very gentle. The river's cross profile is at its deepest and widest.
- **Processes**—Deposition is the most dominant process here as the river loses energy.

Key Terms

Erosion	The wearing away of material e.g. rocks.
Transportation	The movement of material e.g. rocks and sand.
Deposition	The dropping of material due to a lack of energy.
Long profile	A diagram showing a line representing the river's gradient from its source (start) to its mouth (end).
Cross profile	A diagram showing how wide and deep the river channel at certain points along its journey.
River valley	The land either side of the river channel.
River channel	The outline path of land which the river flows in.
Flood	When the river can no longer hold any more water and it spills over the banks.
Process	A series of actions or steps that achieve a result or make a change.
Bed load	The rocks and sand carried by the river.

Flooding

Why do rivers flood?

Natural causes—a steep sided valley and heavy rainfall.

Human causes— deforestation and the increase in urban areas (towns and cities) with impermeable surfaces.

How can we stop flooding?

- We can build a wall across a river called a **dam**. This means we can control how much water flows downstream of the river.
- We can plant trees in the river valley. This is called **afforestation**. Trees will intercept the rain with their leaves and soak it up with their roots, therefore slow the flow of the water into the river.
- We can build walls either side of the river. These are called **embankments**. The walls increase the natural height of the banks of the river and therefore increase its capacity to hold water.

Flooding in the England

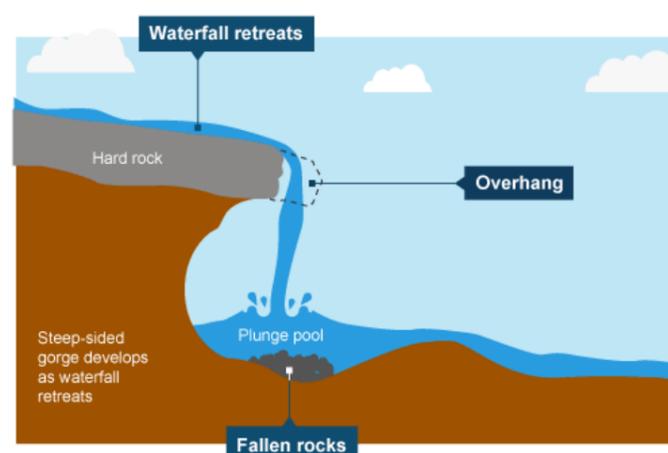
- 2.4 million people in England live in an immediate flood risk area.
- 1 in 6 homes are at risk of flooding.
- The UK spends £4.4 billion a year on flooding.
- You are more likely to be flooded than burgled!

Landforms

Waterfalls

Form in the upper course.

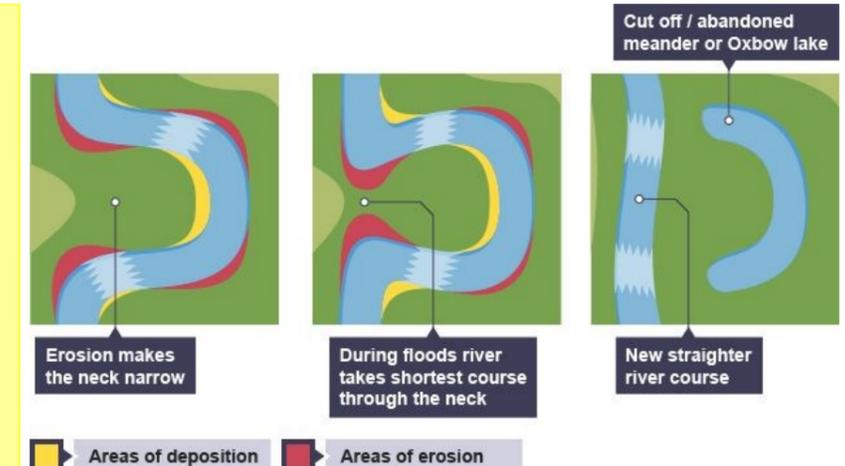
Created by erosion.



Meanders

Form in the middle and lower course.

Created by erosion and deposition.



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Trinity TV > Year 7 > Geography > Term 3>

How do rivers shape the land?