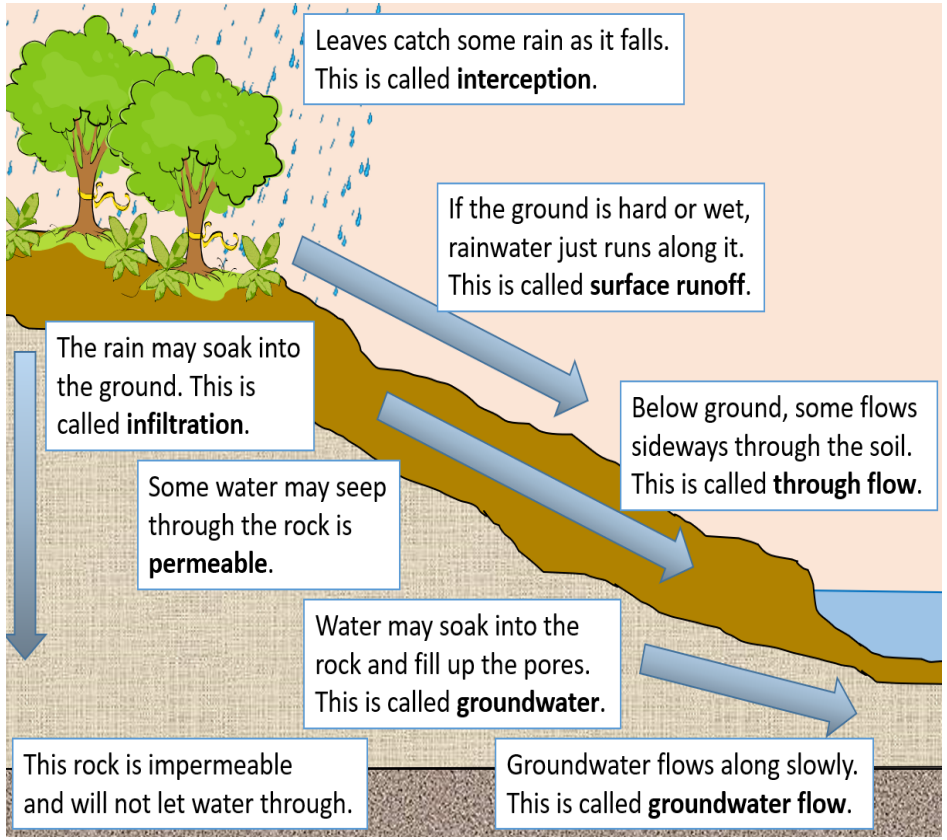
# Year 7 - Rivers

**What should I already know?**

- A river is a moving channel of water from its **source** (start point) on high ground flowing to its **mouth** (end point) on lowland flowing into another body of water (lake or ocean).
- Rivers usually begin in **upland** areas, when rain falls on high ground and begins to flow **downhill**. They always flow downhill because of **gravity**.

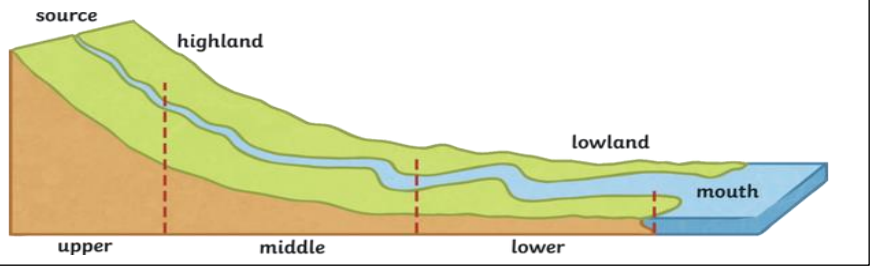
## The Water Cycle



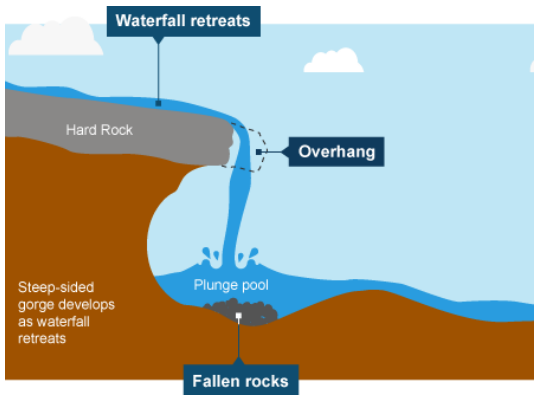

## Key Vocabulary and definitions

| | |
|---|---|
| **Erosion** | The breaking down or wearing away of rock in the river channel. |
| **Hydraulic action** | Water enters cracks and compresses the air, crack then expands. |
| **Abrasion** | Stones rub/bang against river bed/banks, breaking it down. |
| **Attrition** | Stones in the river bash together to become smoother/round. |
| **Solution** | Chemicals in the water react with the stone and dissolve it. |
| **Transportation** | A natural process where material/sediment is carried or moved. |
| **Traction** | Large stones and pebbles pushed along the river bed. |
| **Saltation** | Small pebbles and stones bouncing along the river bed. |
| **Suspension** | Sediment floating in the water of the river. |
| **Solution** | Sediment dissolved in the water of the river. |
| **Deposition** | When sediment is dropped due to a lack of energy. |

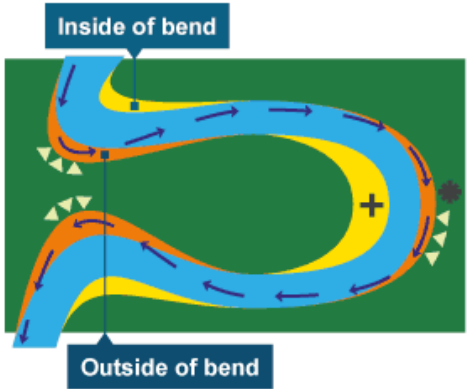
## Long profile of a river

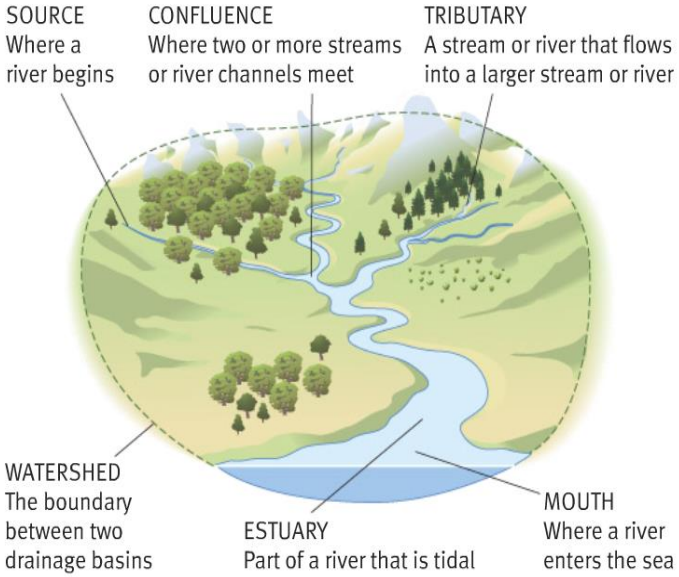


**Water Fall:** (Upper Course)




**Meander:** (Middle/Lower Course)




**Flooding:**

- A river floods when the water normally flowing in the channel overflows its banks and spreads out onto the surrounding land.
- **Physical Factors** affecting flooding: Steep Slopes, Very wet soil, Very dry soil, Rock type
- **Human Factors** affecting flooding: Deforestation, Urbanisation & Over Farming

**Bangladesh Flood**

- Heavy monsoon rains between May and October caused river levels to rise.
- Melting snow from Himalayas added water into rivers flowing through Bangladesh
- 80% of the country was covered by at least 1 metre of flood water.
- Rocks sand and mud from the Himalayas was washed into the river channel


**Boscastle Flood (UK) – 2004**

- Heavy rain caused by extreme frontal activity.
- 3 million tonnes of water added to a small drainage basin of just 40 square kilometres.
- 185mm of rain in just under 5 hours – infiltration excess overland flow
- 3 valleys steep and narrow – broader floodplain would have increased hydraulic radius
- Surrounding vegetation agricultural land: limited interception storage
- High tide in the bay – restricted rate of exit of floodwater