

Geography Year 8 Rivers – Spring 2 Knowledge Organiser

| Key term | Definition |
|------------------|---|
| Drainage basin | An area of land drained by its river and tributaries. |
| Long Profile | The gradient of a river from source to mouth. |
| Erosion | The process of wearing away the land. |
| Hydraulic action | The force of water eroding the bed and banks of the river. |
| Abrasion | Rocks and material carried in the river wearing away the bed and banks. |
| Deposition | Where material in the water is dropped as the river loses energy. |
| Transportation | The movement of material in the river. |
| Meander | A bend in the river. |
| Slip-off slope | An area of deposition on the inside of a meander. |
| Floodplain | An area of flat land either side of a river. |

Revision:



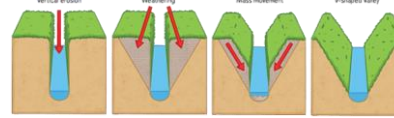
Greater depth:



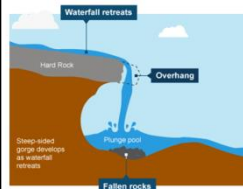
THE UPPER COURSE

Features: Steep sided valleys. Shallow, narrow river channel. V shaped valleys, waterfalls, gorges.

Processes: Vertical erosion



Waterfalls

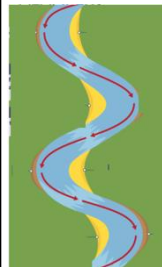


V shaped valleys

1. A waterfall is formed where a river flows **over hard and soft rock**.
2. Soft rock erodes more quickly, **undercutting** hard rock.
3. The hard rock is left **overhanging** and eventually collapses.
4. The fallen rocks swirl around in the **plunge pool**, deepening it through erosion.
5. Over time, the process is repeated and the waterfall retreats upstream.
6. This leaves behind the formation of a steep-sided gorge.

Features: Wider, deeper, less steep valleys. Meanders and oxbow lakes.

Processes: Lateral erosion and deposition.



1. The formation of meanders is due to both **deposition** and **erosion**.
2. The force of the water erodes and undercuts the river bank on the outside of the bend, creating a **river cliff**.
3. On the inside of the bend, where the river flow is slower, material is **deposited**, creating a **slip-off slope**.
4. Over time, the meander loop can become tighter, and the river can break through the **meander neck**. Over time, a new channel is formed, and loop is cut off from the main channel. This cut-off loop is called an **oxbow lake**.



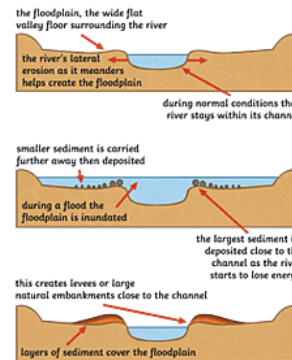
THE LOWER COURSE

Features: wide, deep, flat valleys.

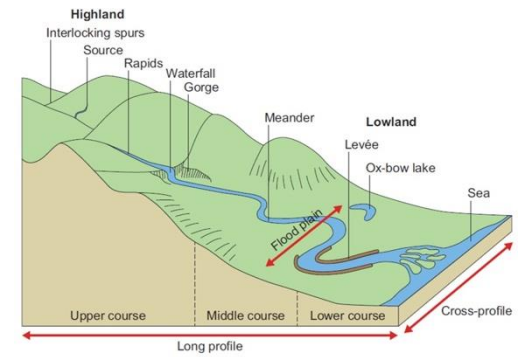
Levees, floodplains, estuaries.

Processes: Deposition.

1. A **floodplain** is the area either side of a river that is flat and sometimes floods.
2. When a river floods, the water loses energy, slows down and **deposition** happens. This builds up the flood plain.
3. **Levees** are natural embankments along the edges of a river channel. These are also built up due to deposition as the heaviest materials are deposited first, closest to the river channel.



LONG PROFILE OF A RIVER



DRAINAGE BASIN

SOURCE

The origin of the river

CONFLUENCE

The point at which two rivers meet.

TRIBUTARY
Smaller streams/ rivers that flow into a larger one.



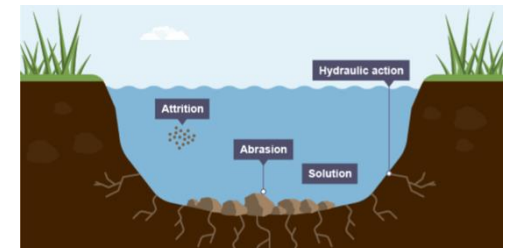
FLOODPLAIN

Flat land along the river that is prone to flooding.

MOUTH

The end where the river meets the sea.

TYPES OF EROSION



- **Attrition** – rocks carried by the river collide and break up into smaller, smoother pieces.
- **Abrasion** – rocks scrape along the bed and banks.
- **Solution** – particles are dissolved by the river.
- **Hydraulic action** - the force of the river against the banks