

GRADE 10 | 2024

Geography: Geomorphology - Rivers and Drainage

Geography

CAPS ALIGNED

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1. The Hydrological Cycle (Water Cycle)

- Evaporation: water turns to vapour from surface
- Transpiration: water released by plants
- Condensation: vapour forms clouds
- Precipitation: rain, snow, hail falls
- Infiltration: water soaks into soil
- Surface runoff: water flows over surface
- Groundwater: water stored underground

2. River Systems

A river system consists of the main river and its tributaries. The drainage basin (catchment area) is the area drained by a river system. The watershed is the boundary between drainage basins.

River Processes

- Erosion: wearing away of the land by the river (hydraulic action, abrasion, corrosion, attrition)
- Transportation: carrying eroded material downstream (traction, saltation, suspension, solution)
- Deposition: dropping of material when the river slows down

3. River Profiles

Upper Course (Mountains)

V-shaped valleys, waterfalls, rapids, interlocking spurs. Erosion dominates.

Middle Course

Valley widens, meanders form, lateral erosion and some deposition.

Lower Course (Near the Sea)

Floodplain, wide flat valley, oxbow lakes, delta or estuary at the mouth. Deposition dominates.

4. Drainage Patterns

- Dendritic: tree-like branching (most common)
- Radial: rivers flow outward from a central high point
- Trellis: main rivers perpendicular to tributaries
- Parallel: rivers flow parallel to each other