

SUBJECT: Geography

UNIT: Year 9 Bridging Unit - Physical Landscapes



Relief of the UK:

- Areas +600m: Peaks and ridges cold, misty and snow common. E.g. Scotland
- Areas -200m: Flat or rolling hills. Warmer weather. E.g. Fens

Types of Weathering

Weathering is the breakdown of rocks where they are.

Carbonation

Breakdown of rock by changing its chemical composition.

Mechanical

Breakdown of rock without changing its chemical composition.

What is Deposition?

When the sea or river loses energy, it drops the sand, rock particles and pebbles it has been carrying. This is called deposition.

Mass Movement

A large movement of soil and rock debris that moves down slopes in response to the pull of gravity in a vertical direction.

- 1 Rain saturates the permeable rock above the impermeable rock making it heavy.
- 2 Waves or a river will erode the base of the slope making it unstable.
- 3 Eventually the weight of the permeable rock above the impermeable rock weakens and collapses.
- 4 The debris at the base of the cliff is then removed and transported by waves or river.

Types of Erosion

The break down and transport of rocks – smooth, round and sorted.

Attrition

Rocks that bash together to become smooth/smaller.

Solution

A chemical reaction that dissolves rocks.

Abrasion

Rocks hurled at the base of a cliff to break pieces apart.

Hydraulic Action

Water enters cracks in the cliff, air compresses, causing the crack to expand.



Waves are created by wind blowing over the surface of the sea. As the wind blows over the sea, friction is created - producing a swell in the water.

Types of Waves

Constructive Waves

This wave has a swash that is stronger than the backwash. This therefore builds up the coast.

Destructive Waves

This wave has a backwash that is stronger than the swash. This therefore erodes the coast.

Formation of Bays and Headlands



Waves attack the coastline. Softer rock is eroded by the sea quicker forming a bay, calm area causes deposition. More resistant rock is left jutting out into the sea. This is a headland and is now more vulnerable to erosion.

Formation of Coastal Stack

Hydraulic action widens cracks in the cliff face over time. Further abrasion widens the crack to form a cave. Caves from both sides of the headland break through to form an arch. Weather above/erosion below – arch collapses leaving stack. Further weathering and erosion leaves a stump.