



Geography Knowledge Organiser

Year Group : 7

Topic: Coasts

Half Term: Summer two



What is a coast?

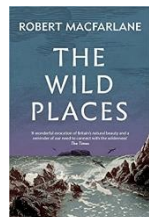
Coast: An area where the **land meets the sea**. They can also be called the coastline or the seashore.

Nowhere in the UK is more than 113 kilometres (70 mi) from the coast.

Coastlines are important areas as they:

1. Provide habitats for lots of different organisms
2. Are hotspots for tourists, so can help to improve the economy of an area
3. Have lots of renewable energy, so we can produce electricity without damaging the environment

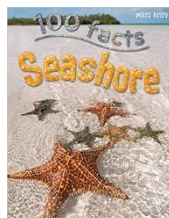
Suggested reading:



The Wild Places
Robert Macfarlane



Coastlines: The story of our shore
Patrick Barkham



100 facts Seashore
Miles Kelly

Erosion

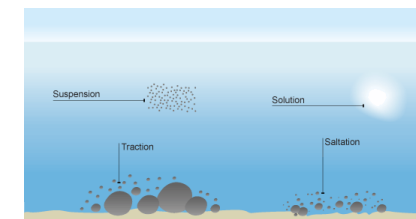
Erosion is the **wearing away** of rock. There are **4 types**:

1. **Hydraulic action:** Air may become trapped in **joints** and **cracks** on a cliff face. When a wave **breaks**, the **trapped** air is **compressed** which **weakens** the cliff and causes **erosion**.
2. **Abrasion:** Bits of **rock** and **sand** in waves **grind** down cliff surfaces like **sandpaper**.
3. **Attrition:** Waves smash **rocks** and **pebbles** on the shore **into each other**, and they **break** and become **smoother**.
4. **Solution:** **Acids** contained in sea water will **dissolve** some types of rock such as chalk or **limestone**.

Transportation

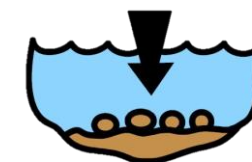
Transportation is the **movement of material** in the sea and **along the coast by waves**. There are **5 types**:

1. **Suspension:** fine light material is carried along in the water.
2. **Traction:** large boulders and rocks are rolled along the river bed.
3. **Solution:** minerals are dissolved in the water and carried along in solution.
4. **Saltation:** small pebbles and stones are bounced along the river bed.
5. **Longshore drift:** the zig-zag movement of material along the coast by the sea



Deposition

Deposition occurs when the sea **loses energy**, it **drops the material** it has been carrying.



Hard rock

Hard rock such as **chalk** is **more resistant** to the processes of **erosion**.

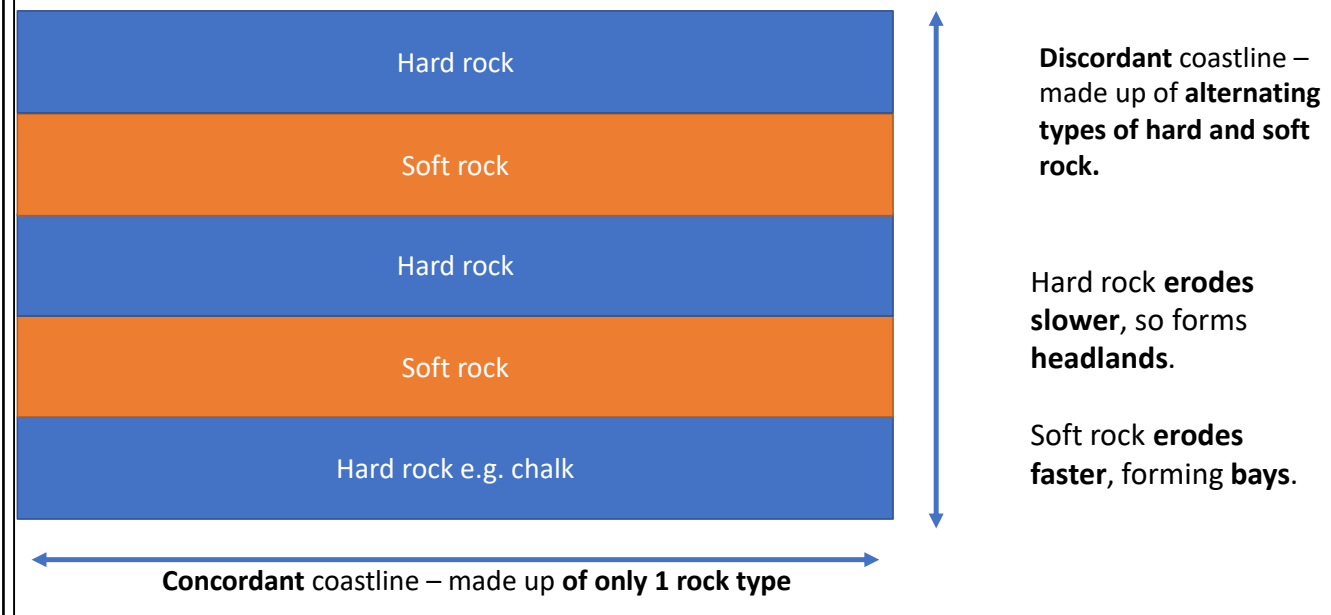
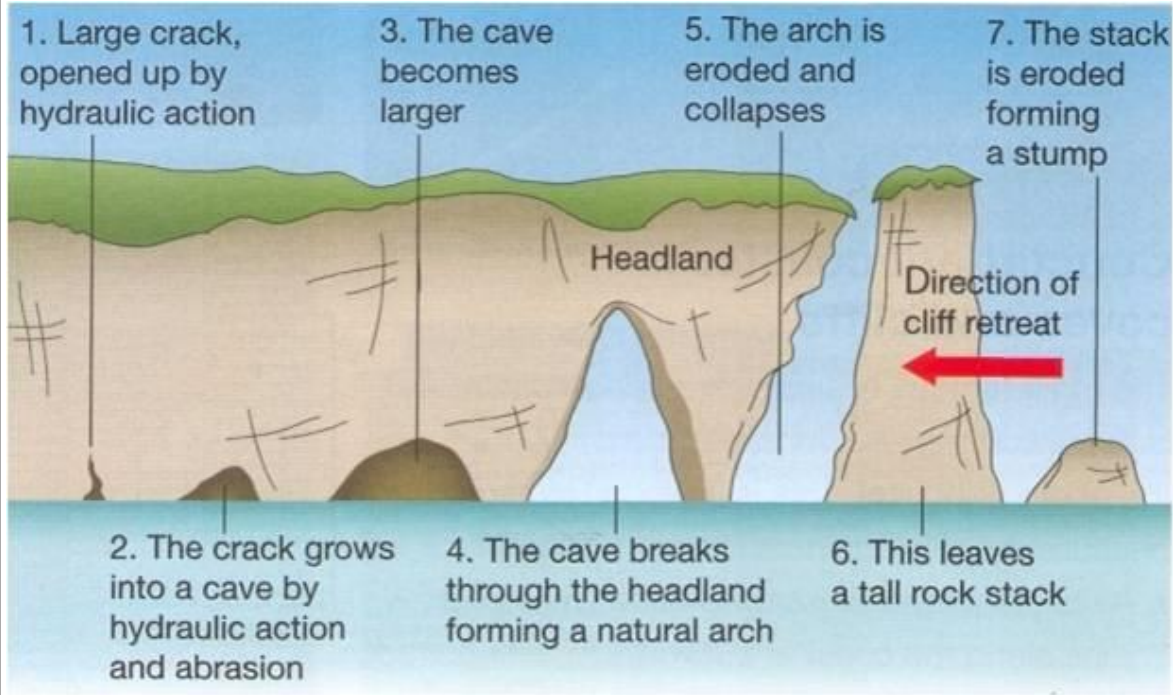
Hard and soft rock

Soft rock made up of **clay and sand** is **less resistant** to the natural processes of **erosion**.

Soft rock

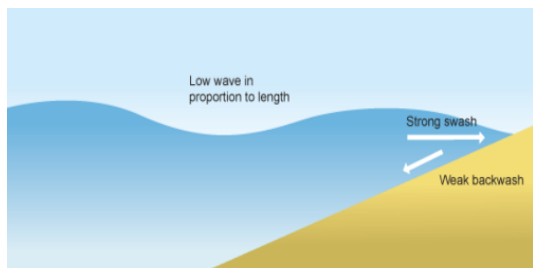
Erosional landforms along the coast

Erosional landforms are formed through the process of erosion.



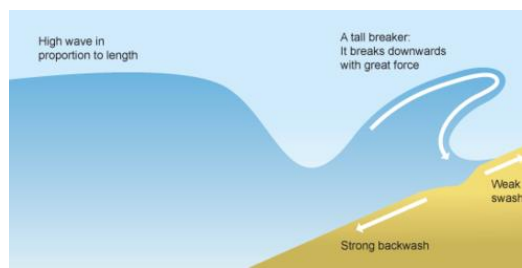
Types of waves

Constructive



Constructive waves have a strong swash and a weak backwash. They deposit material and help to form beaches.

Destructive



Destructive waves have a weak swash and a strong backwash. They erode the coast and carry away sand and pebbles from beaches.

Coastal defences

Hard engineering

This involves building artificial structures to help reduce the rates of erosion at the coast.

Sea walls

Concrete walls that are placed at the foot of a cliff to prevent erosion. They are curved to reflect the energy back into the sea.

Rock armour

Large boulders placed at the foot of a cliff. They break the waves and absorb their energy.

Groynes

Wooden or rock structures built out at right angles into the sea.

Soft engineering

This involves using natural resources to help reduce the rates of erosion at the coast. No structures are built.

Beach nourishment

Sand is pumped onto an existing beach to build it up.

Reprofiling

Sediment is redistributed from the lower part of the beach to the upper part of the beach.

Dune nourishment

Marram grass planted on sand dunes stabilises the dunes and helps to trap sand to build them up.