



Knowledge Check 1
Content

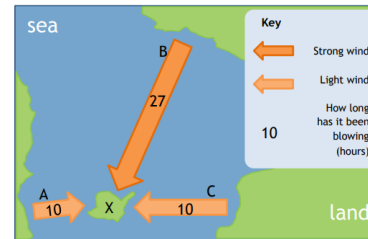


Knowledge Check 2
Content

Arch	A cave that has eroded through a headland
Backwash	Part of a wave that returns down the beach.
Bay	A broad coastal area where the land curves inwards.
Cave	A natural chamber in a cliff
Constructive Waves	Low gentle waves
Deposition	The putting down of sediment.
Destructive Waves	Large powerful waves.
Erosion	The wearing away and removal of material by a wave
Fetch	The distance a wave has travelled.
Geology	The rocks that make up an area
Headland	A narrow piece of land that projects from a coastline into the sea
Landform	a natural feature of the earth's surface.
Sediment	Particles of sand & mud etc
Stack	A vertical structure left after an arch has collapsed.
Swash	Part of a wave that travels up the beach.
Tide	The daily rising and falling of the sea
Transportation	The movement of sediment from one place to another.
Wave	A movement of water caused by the wind

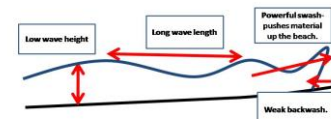
What affects the size of a wave?

- The distance a wave has travelled, known as the fetch.
- How quickly the wind is blowing.
- How long the wind has been blowing for.

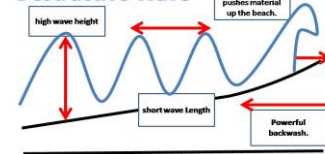


Types of wave

Constructive Wave



Destructive Wave



Constructive

- Stronger swash than backwash
- Low gentle waves
- Deposit sediment

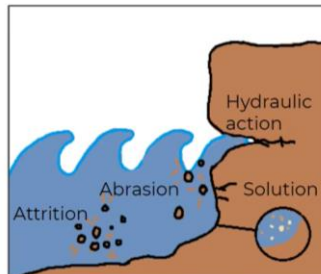
Destructive

- stronger backwash than swash.
- remove material from beaches
- high and steep waves

What are the different types of erosion?

Abrasion -

Eroded material is hurled or scrapes against the cliff, breaking off rock.



Attrition -

Eroded materials in the sea hit into each other, breaking down into smaller pieces.

Hydraulic action -

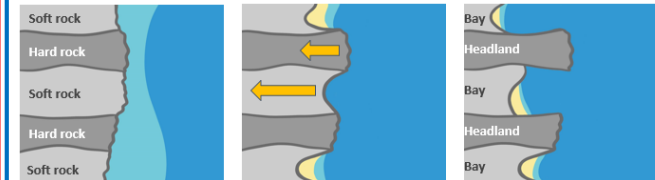
Waves compress pockets of air in cracks in a cliff, causing the crack to widen, breaking off rock.

Solution -

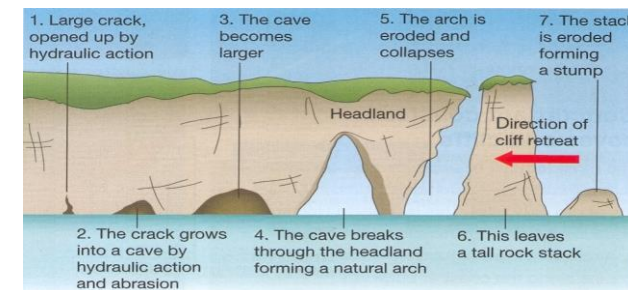
Cliffs dissolve in seawater

How are erosional landforms created?

Headlands and Bays



1. Firstly, there are alternating layers of hard rock and soft rock along a coastline.
2. Destructive waves cause erosion to take place due to hydraulic action and abrasion.
3. As the soft rock is less resistant it erodes quickly, but the hard rock is more resistant so it erodes slowly.
4. As the soft rock retreats it creates a bay. The hard rock remains and this creates a headland.



1. A crack forms in a headland
2. Hydraulic action widens the crack to form a cave,
3. The cave is eroded by abrasion and hydraulic action all the way through the headland, creating an arch.
4. The base of the arch gets eroded and becomes wider, the roof has no support so it collapses
5. Leaving behind a vertical stack



Knowledge Check 3
Content



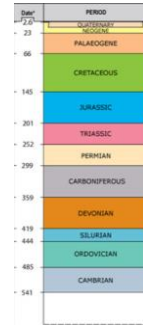
Knowledge Check 4
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Key terms

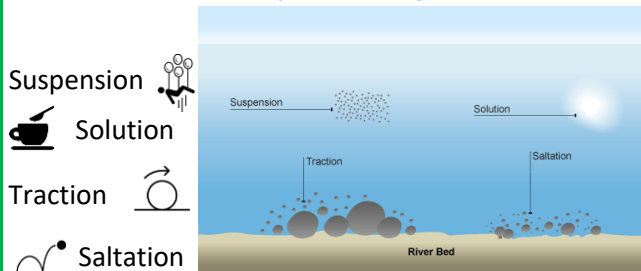
Groynes	Wooden or concrete structures that stick out into the sea and interrupt longshore drift.
Hard Engineering	Manmade structures used to protect the coast.
Lagoon	A fresh water lake that forms behind a bar.
Longshore Drift	The process of sediment moving along the coast.
Managed Retreat	Allowing less valuable land to be taken over by the sea.
Saltation	Sediment bounces along the sea floor.
Sea Wall	A concrete structure that protects the coastline from wave attack.
Soft Engineering	Protecting the coastline using natural materials and processes.
Solution	The sea dissolves minerals in rocks
Spit	Narrow depositional landform that is attached to the coast at one end.
Suspension	Lighter sediment floats in the sea.
Tombolo	A spit that attaches to an island from the mainland.
Traction	Large sediment is rolled on the sea bed

What is the Jurassic Coast?

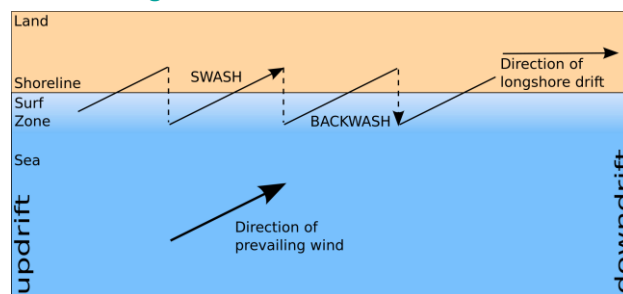
- Located in Devon and Dorset
- It is England's only Natural World Heritage Site and the only place in the world where rocks from the Triassic, Jurassic and Cretaceous are sequenced together.
- Brings in over £1.5 billion in tourist revenue a year.



How is sediment transported along the coastline?

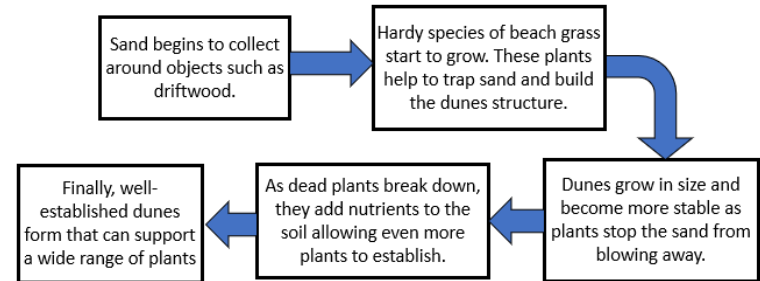


What is longshore drift?



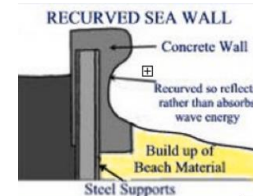
1. The prevailing wind blows the waves onto the shore at an angle.
2. The swash carries sediment onto the beach at an angle.
3. It is then pulled back to sea with the backwash at a right angle to the shore due
4. Gradually, sediment is moved along the coastline in the direction of the prevailing wind

How do sand dunes form?



How can the coastline be protected?

	Advantages	Disadvantages
Hard Engineering	Strong, durable, reliable	Expensive, ugly
Soft Engineering	Looks natural, cheap, sustainable	Regular maintenance, not as effective



Sea Wall

- Physical barrier between the coast and sea.
- The steps in front of the sea wall absorb wave energy.
- When a wave hits the sea wall it is blocked.
- Some are recurved to reflect wave energy back to sea.

Groynes

- Sticks out to sea and interrupts longshore drift.
- Builds up the beach.
- Waves break further out to sea.
- Causes waves to lose energy and deposit load



Managed Retreat

- Do nothing – free of charge
- Less valuable land is flooded
- Salt marshes are created
- More valuable land is protected

