

# Year 8

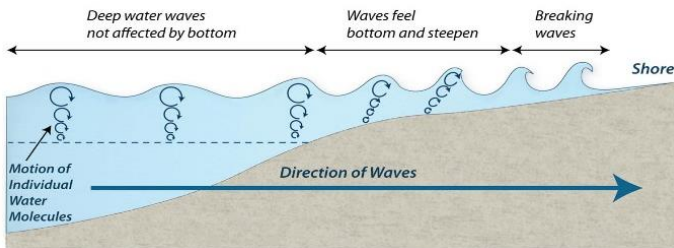
## Landscape Shapers : COASTS

### How do waves form?

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.

### Why do waves break?

- 1) Waves start out at sea.
- 2) As waves approach the shore, friction slows the base.
- 3) This causes the orbit to become elliptical.
- 4) Until the top of the wave breaks over.



### Types of Erosion

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

<b>Attrition</b>	Rocks that bash together to become smooth/smaller.
<b>Solution</b>	A chemical reaction that dissolves rocks.
<b>Abrasion</b>	Rocks hurled at the base of a cliff to break pieces apart.
<b>Hydraulic Action</b>	Water enters cracks in the cliff, air compresses, causing the crack to expand.

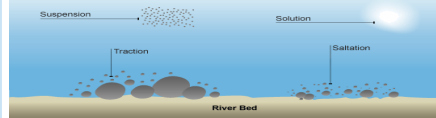
### Types of Weathering

Weathering is the breakdown of rocks where they are.

<b>Carbonation</b>	Breakdown of rock by changing its chemical composition.
<b>Mechanical</b>	Breakdown of rock without changing its chemical composition.

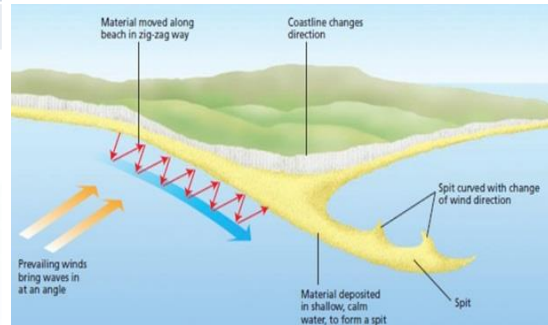
### What is Deposition?

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



### Formation of Coastal Spits - Deposition

- 1) Swash moves up the beach at the angle of the prevailing wind.
- 2) Backwash moves down the beach at 90° to coastline.
- 3) Zigzag movement (Longshore Drift) transports material along beach.
- 4) Deposition causes beach to extend, until reaching a river estuary.
- 5) Change in prevailing wind direction forms a hook.
- 6) Salt marsh forms behind spit.

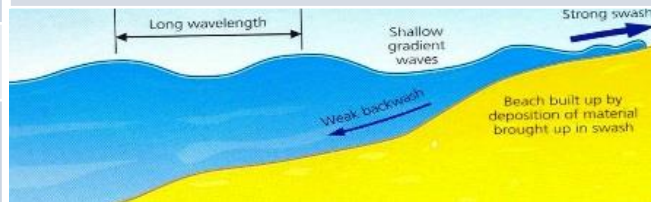


<b>Size of Waves</b>	Fetch how far the wave has travelled Strength of the wind. How long the wind has been blowing for.
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### Types of Waves

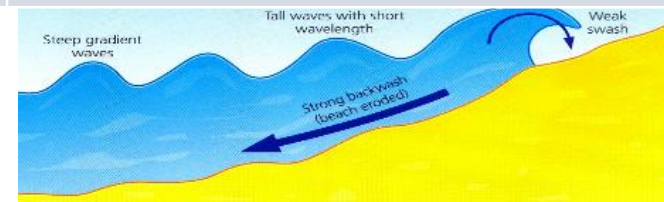
#### Constructive Waves

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.



### Types of Transportation

A natural process by which eroded material is carried/transported.

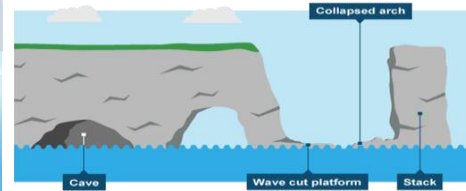
<b>Solution</b>	Minerals dissolve in water and are carried along.
<b>Suspension</b>	Sediment is carried along in the flow of the water.
<b>Saltation</b>	Pebbles that bounce along the sea/river bed.
<b>Traction</b>	Boulders that roll along a river/sea bed by the force of the flowing water.

### Formation of Bays and Headlands



- 1) Waves attack the coastline.
- 2) Softer rock is eroded by the sea quicker forming a bay, calm area causes deposition.
- 3) 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



- 1) Hydraulic action widens cracks in the cliff face over time.
- 2) Abrasion forms a wave cut notch between HT and LT.
- 3) Further abrasion widens the wave cut notch to form a cave.
- 4) Caves from both sides of the headland break through to form an arch.
- 5) Weather above/erosion below –arch collapses leaving stack.
- 6) Further weathering and erosion leaves a stump.