






What impacts have the actions of human kind and nature had on our coastline?

<u>Key Knowledge</u>	
1	<p>Types of Waves</p> <p>Constructive waves: low frequency, long wavelength, gentle slope, deposition of material</p>  <p>Destructive waves: high frequency, short wavelength, steep slope, erosion of material</p> 
2	<p>Weathering and erosion</p> <p>Weathering is the breakdown of material in situ (in its original place)</p> <p>Erosion is the breakdown of material</p>
3	<p>Types of weathering</p> <p>Mechanical weathering – a physical process where a change in physical conditions cause rocks to break down. The two main types are freeze-thaw and wetting and drying</p>   <p>Chemical weathering – The breakdown of rocks caused by a chemical change within the rock.</p> 
4	<p>Fetch, Swash, and Backwash</p> <p>Fetch: the distance that wind has travelled across open water</p> <p>Swash: when a wave breaks and rushes up the shore</p> <p>Backwash: when the water recedes back into the sea</p>
5	<p>Transportation of Material</p> <p>Waves can transport materials like sand, sediment, and rocks along the coast</p> <p>This can lead to changes in beach shape and size</p>

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6	<p>Longshore Drift</p> <ul style="list-style-type: none">• The movement of sediment along the beach due to waves hitting the coast at an angle• Sediment is carried along the beach by the swash and backwash of waves
7	<p>Landforms of Erosion</p> <ul style="list-style-type: none">• Caves: formed when waves erode the coastline and create holes in the rock• Arches: when a cave is eroded through a headland, creating a bridge-like structure• Stacks: when an arch collapses, leaving a single isolated column of rock
8	<p>Landforms of Deposition</p> <ul style="list-style-type: none">• Spits: a narrow strip of land extending from the coast into the sea, formed by longshore drift• Beaches: areas of sand or pebbles that have been deposited by waves
9	<p>Hard Engineering</p> <p>Hard engineering: using man-made structures to protect the coast from erosion, such as sea walls and groynes</p> <p>Soft engineering: using natural methods to protect the coast, such as beach nourishment and dune regeneration</p>
10	<p>Soft Engineering</p> <p>Soft engineering: using natural methods to protect the coast, such as beach nourishment and dune regeneration</p>

Think Like a Geographer – Big Ideas

The Physical World

Land, water, air and ecological systems and the processes that bring about change in them

Earth is the home of human kind

Linking the physical world to human environments

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Questions

What is erosion?	Erosion is the process by which rock, soil, and other earth materials are worn away by natural elements, such as wind and water.
What are the four types of erosion?	Abrasion Hydraulic action Solution Attrition
What are the two types of waves?	Constructive waves Destructive waves
What is longshore drift?	Longshore drift is the movement of sediment along the beach due to waves hitting the coast at an angle. Sediment is carried along the beach by the swash and backwash of waves.
What is the difference between swash and backwash?	Swash refers to the water rushing up the shore after a wave breaks, while backwash refers to the water receding back into the sea. Swash moves material up the beach, while backwash moves material back down towards the sea.
What is hard engineering?	Hard engineering refers to the use of man-made structures to manage and protect the coast from erosion.
What is soft engineering?	Soft engineering refers to the use of natural methods and techniques to manage and protect the coast from erosion

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What is a cave?	A cave is a landform created when waves erode the coastline and create holes or hollow spaces in the rock.
What is a spit?	A spit is a narrow strip of land that extends from the coast into the sea. It is formed by longshore drift, where sediment is transported along the beach by the action of waves
What is the primary cause of coastal erosion?	The primary cause of coastal erosion is the action of waves. Waves, influenced by factors such as wind strength, tides, and sea level changes, erode the coast through processes like abrasion, hydraulic action, solution, and attrition.