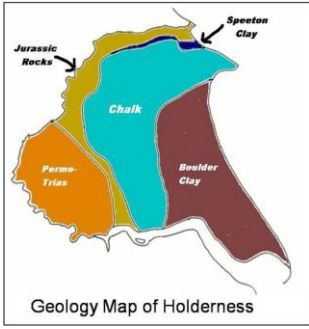
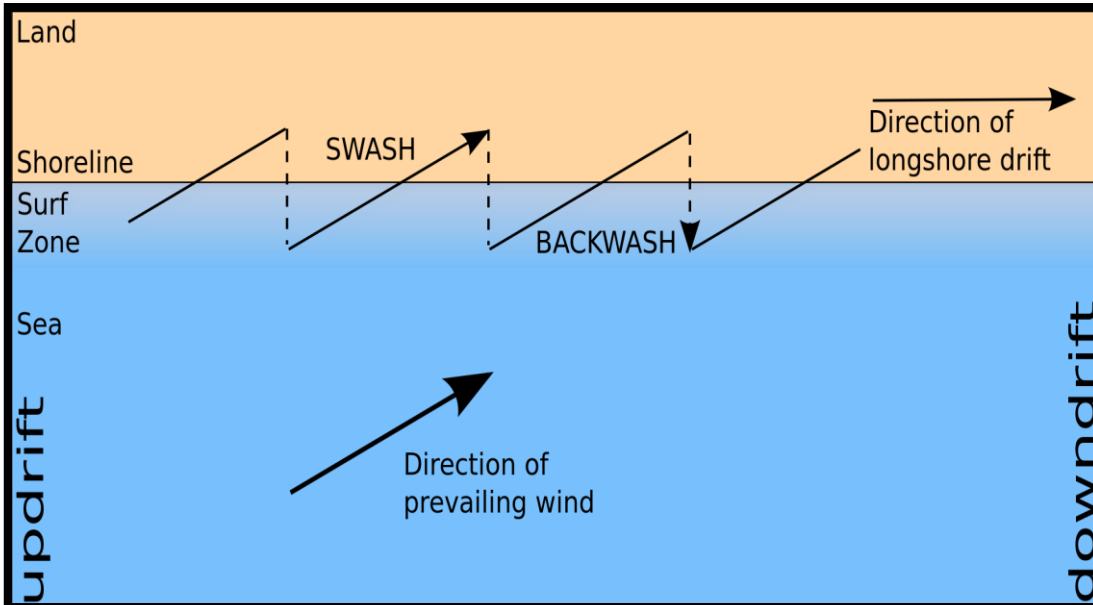


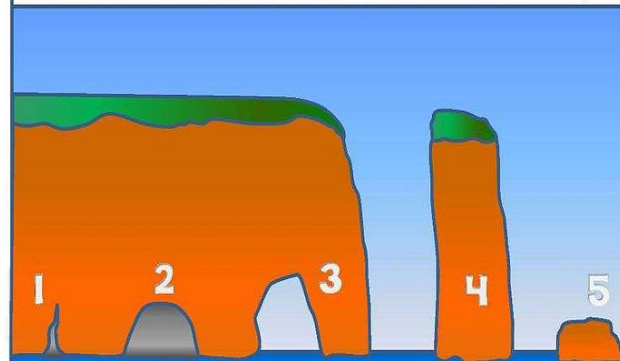
GCSE GEOGRAPHY – COASTAL LANDSCAPES – KNOWLEDGE ORGANISER

KEY TERMS	UK Landscapes / Waves	Physical Processes	Coastal Realignment
<p>Landscape: area of land classified as being visually distinct</p> <p>Waves: ripples in the sea caused by wind</p> <p>Cliff: steep high rock face formed by weathering and erosion</p> <p>Beach: zone of deposited material</p> <p>Transportation: movement of material</p> <p>Mass Movement: downhill movement of material</p> <p>Deposition: Occurs when material being transported by the sea is dropped due to the sea losing energy.</p>	<p>What causes waves:</p> <ul style="list-style-type: none"> Speed of the wind, how long the wind has been blowing for, the fetch (the distance the wind has been blowing for) <p>Constructive</p> <ul style="list-style-type: none"> Bays / build up beaches / summer Strong swash / weak backwash <p>Destructive</p> <ul style="list-style-type: none"> Exposed areas / destroys beaches / winter Weak swash / strong backwash <p>Long Shore Drift</p> <ul style="list-style-type: none"> Transportation of material due to prevailing wind See diagram on the back. 	<p>Weathering</p> <ul style="list-style-type: none"> Chemical: chemical reaction with rocks Mechanical: freeze-thaw <p>Transportation:</p> <ul style="list-style-type: none"> Solution: particles dissolved in water Suspension: particles carried in water Saltation: particles hop along Traction: large boulders roll along <p>Mass Movement</p> <ul style="list-style-type: none"> Sliding: material on mass moves downslope Slumping: material moves in a straight path Rock fall: rocks fall off <p>Erosion</p> <ul style="list-style-type: none"> Hydraulic Action: sheer force of the water Attrition: rocks collide with rocks / sea bed Abrasion: rocks rub against sea bed Solution: rocks dissolve in water 	<p>Managed retreat is when a decision is made to no longer, 'hold the line' and allow the coast to flood / erode land. Case study: Medmerry, West Sussex.</p> <p>Benefits</p> <p>Social: reduces pressure on other areas along the coastline.</p> <p>Economic: it is cheaper in the long term.</p> <p>Environmental: designed to conserve or enhance the natural environment.</p> <p>Costs</p> <p>Social: relocation of people to other areas and communities split up</p> <p>Economic: short term costs are high due to compensation pay outs</p> <p>Environmental: large areas of agricultural land is lost</p>
Rock Structure – Holderness Coast	Features of Erosion	Features Deposition	Coastal Management (Hard / Soft)
<ul style="list-style-type: none"> Soft rock is easily eroded (boulder clay) compared to harder rock (chalk) Discordant coastline (boulder clay in the south and chalk in the north) <p>Landforms on the Holderness Coast</p> <ul style="list-style-type: none"> Flamborough Head: crack, cave, arch, stack, stump / wave cut platform / headland and bays / rock falls Skipsea: slumping / sliding cliffs / beach Spurn Point: spit  <p>Geology Map of Holderness</p>	<p>Headland and Bays (see diagram)</p> <ul style="list-style-type: none"> Flamborough Head / Bay Headland is a cliff that juts out into the sea (hard rock) and a bay is formed due to soft rock being eroded quickly. <p>Wave Cut Platforms (see diagram)</p> <ul style="list-style-type: none"> Flamborough, Holderness Coast Caused by high and low changes Cliff retreat overtime <p>Caves, arches and stacks (see diagram)</p> <ul style="list-style-type: none"> Flamborough Head, Holderness Coast Headland formed Crack eroded through HA and attrition HA and attrition forms a cave Cave eroded on both sides forming an arch Weathering causes arch to weaken and collapse Stack is left and is eroded down to become a stump due to HA, attrition and solution 	<p>Beaches</p> <ul style="list-style-type: none"> Low energy constructive waves occur Material is deposited and built up over time as it is carried up the beach and weak backwash means material cannot be transported away <p>Sand Dunes Requirements for Formation</p> <ul style="list-style-type: none"> A large flat beach Large supply of sand Large tidal range to allow the sand to dry On shore wind to move material to the back of the beach An obstacle such as driftwood for the dune to form against <p>Spits and Bars (see diagram)</p> <ul style="list-style-type: none"> Spit forms due to long-shore drift and deposition and is only connected to land on one side Bar forms due to long-shore drift and deposition and is connected to land on both sides 	<p>(HE) Sea Walls:– (+) sense of security, last for many years (-) £5,000 a metre, ugly to look at</p> <p>(HE) Groynes:– (+) act as windbreaks, stops long-shore drift, £5,000 per groyne (-) restrict sediment supply down the coast and can increase erosion rates</p> <p>(HE) Gabions:– (+) £110 a metre, last 20 to 25 years (-) dangerous when damaged, damages sea birds feet</p> <p>(HE) Rock Armor:– (+) £1,000 a metre, quick and easy to complete (-) makes access to the beach difficult, rocks imported and inflates the costs.</p> <p>(SE) Beach nourishment:– (+) wider beach means more room for users protects coastal properties, (-) costs £300,000 to hire a dredger, needs to be repeated</p> <p>(SE) Beach profiling:– (+) protects a large area of land (-) bulldozers restrict access to the beach, £200,000 a year</p> <p>(SE) Sand Dune Regeneration:– (+) sand dunes protect land, small planting projects use volunteer labour (-) has to be checked using twice a year, sand dunes change naturally</p>

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Formation of Caves, arches, stacks and stumps

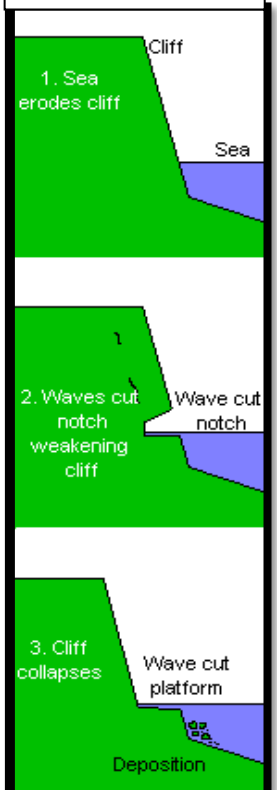


Crack Cave Arch Stack Stump

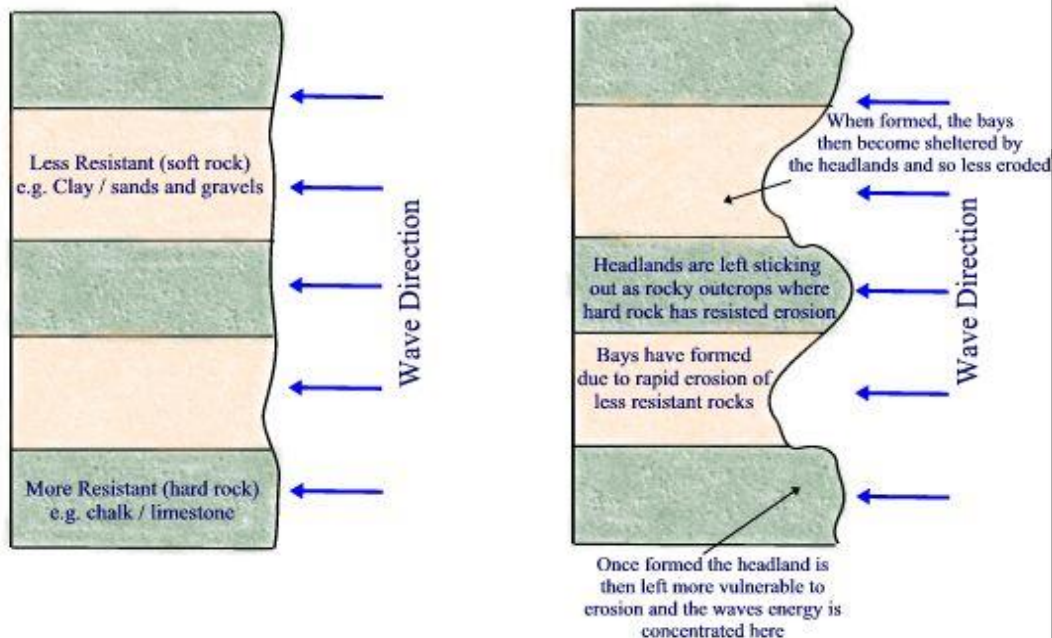
- 1 Waves attack rock face using hydraulic action and abrasion. Crack is formed.
- 2 Over time, crack is enlarged to form cave.
- 3 Cave is widened and deepened and pushes through the headland to form a natural arch.
- 4 Undercutting and weathering lead arch to collapse leaving a stack.
- 5 Weathering and erosion wear stack down to a stump.

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Wave cut platform



The Formation of Headlands and Bays



The Formation of a Spit

