

Name: \_\_\_\_\_ Form: \_\_\_\_\_

Landforms and landscape processes:

# COASTS



1. To know what factors affect the strength of waves	😊 😐 😞
2. To know the difference between Constructive and Destructive wave	😊 😐 😞
3. To be able to draw a Beach profile	😊 😐 😞
4. To be able to describe and explain the process of transportation	😊 😐 😞
5. To be able to describe and explain the formation of landforms of erosion	😊 😐 😞
6. To be able to explain the formation of wave cut platforms	😊 😐 😞
7. To explain the formation of a cave, arch, stack and stump	😊 😐 😞
8. To explain the formation of Headlands and Bays	😊 😐 😞
9. To be able to describe and explain the formation of landforms of deposition: A Spit and a Bar	😊 😐 😞
10. To be able to explain the formation of a salt marsh and describe the vegetation that can be found.	😊 😐 😞
11. To know the succession on SAND DUNES	😊 😐 😞
12. To know the formation of coral reefs	😊 😐 😞

# COASTS

## 1. To know what factors affect the strength of waves

Read 



**Waves** are the primary force causing erosion along coastlines. A wave is formed by the wind blowing across the surface of the water, creating ripples, which then grow into waves. As waves reach the coast the lower section slows due to friction. The upper section topples over and breaks forward.

The **Fetch** determines how powerful a wave may be. It is the distance that the wave has travelled.

For instance, a wave hitting the coast of Cornwall (South West UK) may have travelled over 4000 miles to get there, all the way across the Atlantic. However a wave hitting Dover (South East UK) may have only travelled the width of the English Channel.



The **Strength of the Wind** also influences the power of the waves, so even those with a relatively short fetch can have a great deal of energy, and therefore cause a lot of damage to the coastline.

The **Prevailing Wind** is the direction that the wind usually blows from.

**THE STRONGER/ WEAKER THE WIND AND THE LONGER/ SHORTER THE FETCH, THE MORE POWERFUL THE WAVES ARE.**

## 2. To know the difference between Constructive and Destructive waves

RECAP: What is the difference between swash and backwash?

Swash is.....

Backwash is.....

### Constructive and destructive waves

Complete the following:

Words to use: Swash, swash, backwash, backwash, built up, gently, break, steep, long

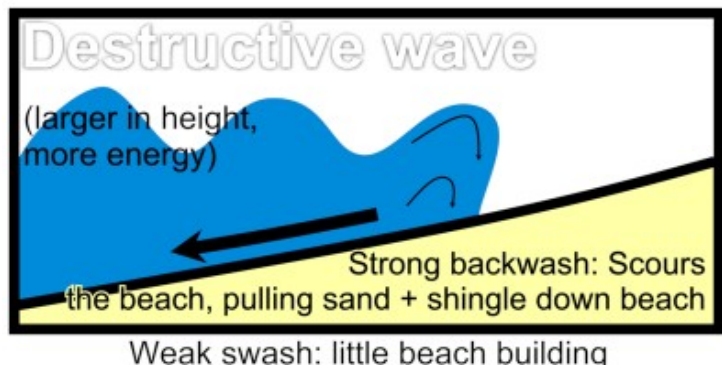
Destructive Waves have a number of important characteristics:

i) Their.....is much stronger than their....., allowing them to remove material from the beach.

ii) They are frequent in number, usually between 10 and 15 waves per minute.

iii) They are tall waves, meaning they have a greater distance to fall when they..... This causes them to scour (dig) out the beach material.

iv) Destructive waves create a .....**narrow beach**.



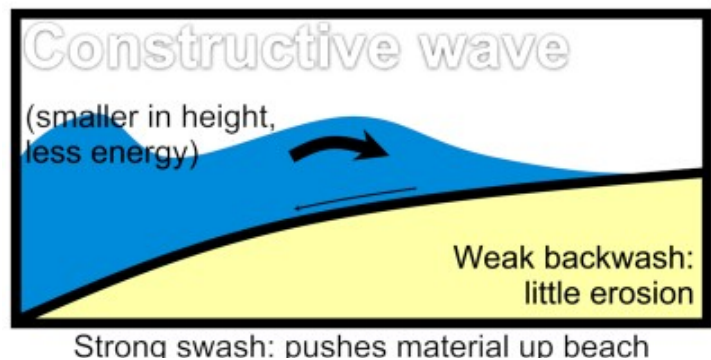
Constructive Waves have a number of important characteristics:

i) Have a stronger..... than ..... This causes the beach to be..... by the deposited material.

ii) They are less frequent, reaching the shore between 6 and 9 times each minute.

iii) They are.....waves and so roll onto the beach rather than crashing onto it.

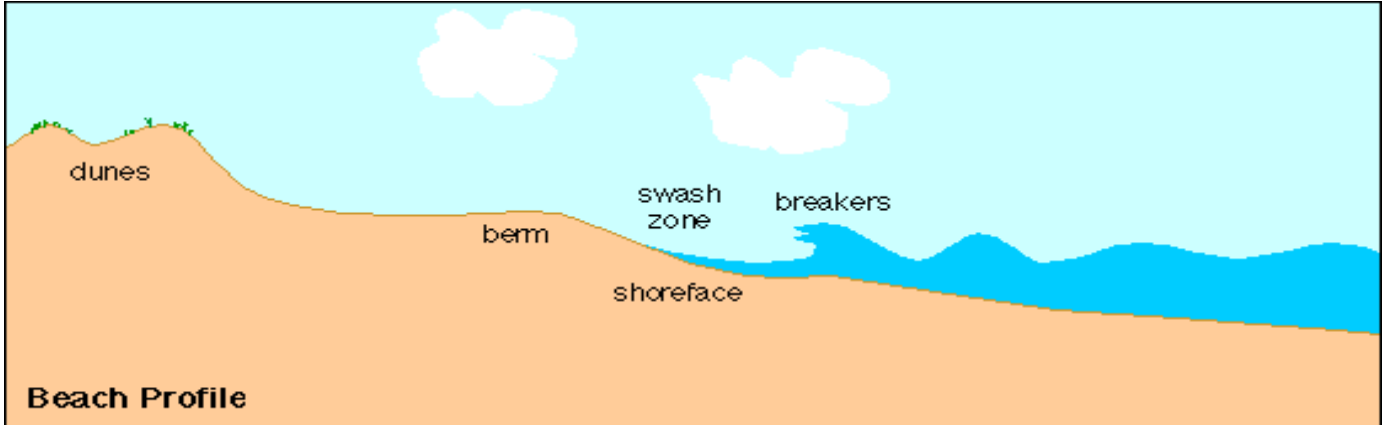
iv) Constructive waves create a wide,.....**sloping beach**.



### 3. Field study skills: To be able to draw a Beach profile

Beach profile

If you were to look at the beach profile (side on) what would you see?



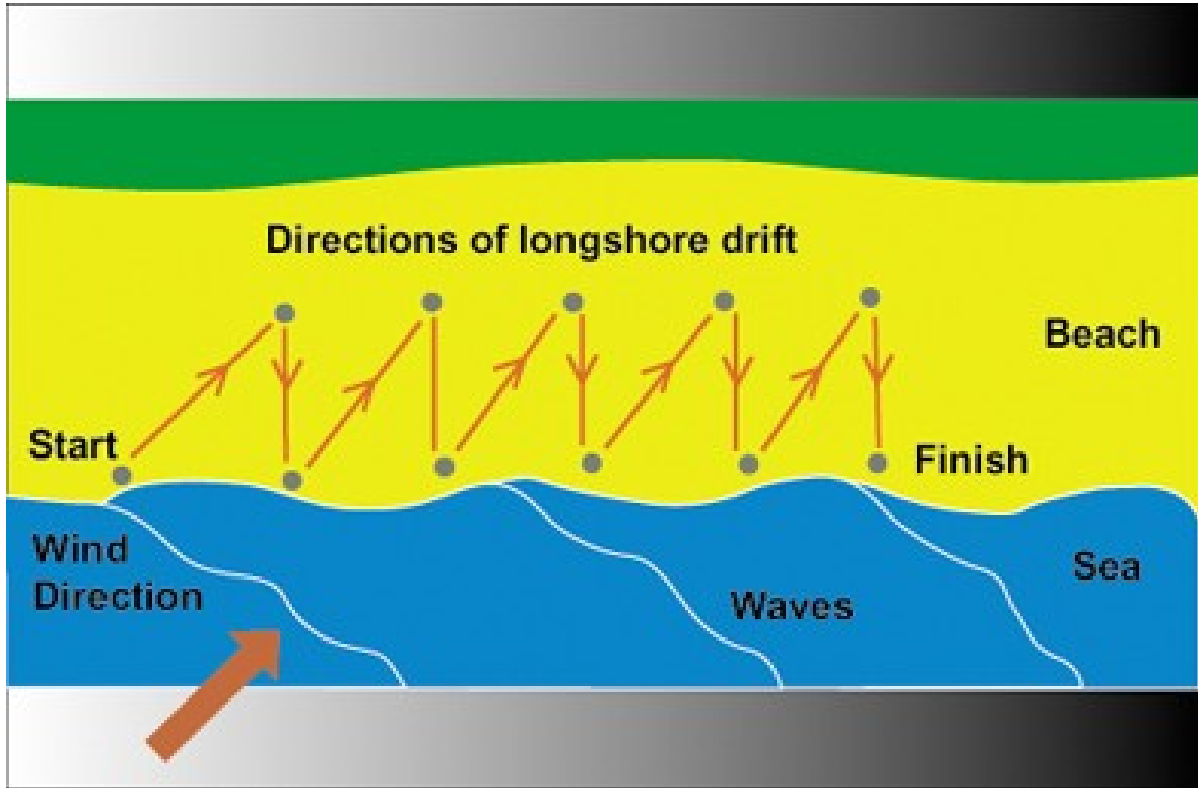
(Some labels to include: HIGHWATER MARK, LOWWATER MARK, BERM, SMALLEST PEBBLES, LARGEST PEBBLES)

Draw a sketch of the beach profile (from above) and add your own labels:

A large empty rectangular box provided for drawing a sketch of the beach profile from above and adding labels.

# 4. To be able to describe and explain the process of transportation

## Longshore drift



Complete the following paragraph with the words below:

**back, angle, zig zag, prevailing**

**Longshore drift** is the movement of material along the beach in a..... pattern. The .....**wind** is blowing at an angle to the coast. This affects the direction of the **swash**. The swash approaches at an.....to the beach pushing the sediment with it. The **backwash** is affected by **gravity** and drags the beach material.....into the sea where the process repeats.

**Task: Add the following words to the diagram above:**

**Swash, backwash and prevailing wind**

Recap: See if you can memorise the diagram above, including the key words you have added.

**Recap: Longshore drift**

Without looking at the previous page, draw a diagram to explain longshore drift. Underneath it, explain how longshore drift happens.

Words to use:

Angle, prevailing wind, waves, gravity, swash, backwash, right-angles, transportation.



Explain the process of longshore drift:

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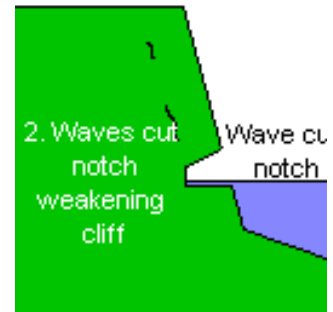
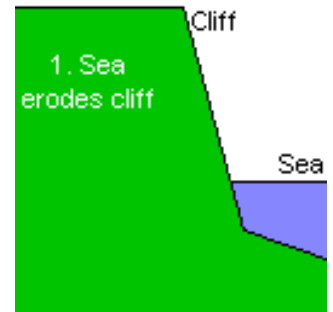
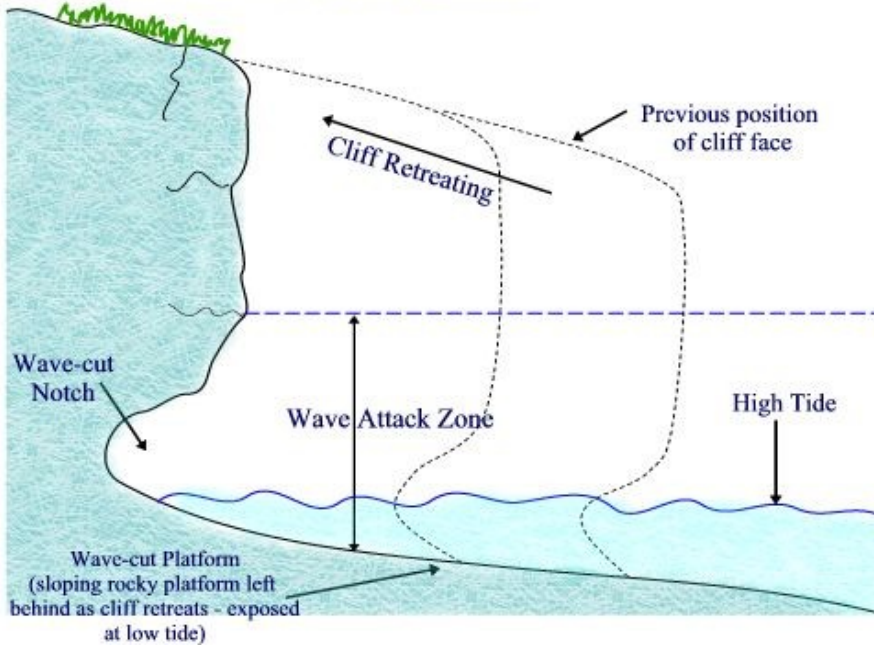
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# 5. To be able to describe and explain the formation of landforms of erosion

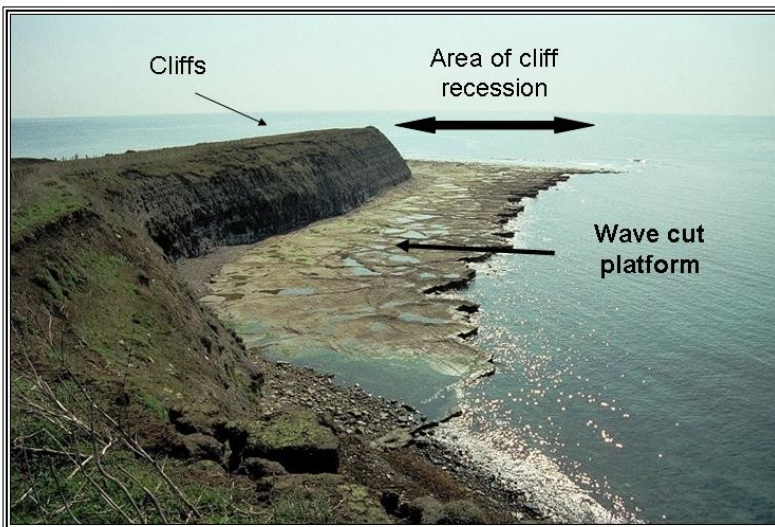
## Wave cut platforms

Cliff Erosion and Wave-cut Platforms



### An example of a wave cut platform

Kimmeridge Bay off the Dorset Coast



Using the diagrams and picture above, revise the formation of a wave cut platform.

## 6. To be able to explain the formation of wave cut platforms

Recap: Without looking at the previous page, draw a sketch of a wave cut platform and explain its formation.

Sketch of a wave cut platform

Example?.....

Explain the formation of a wave cut platform

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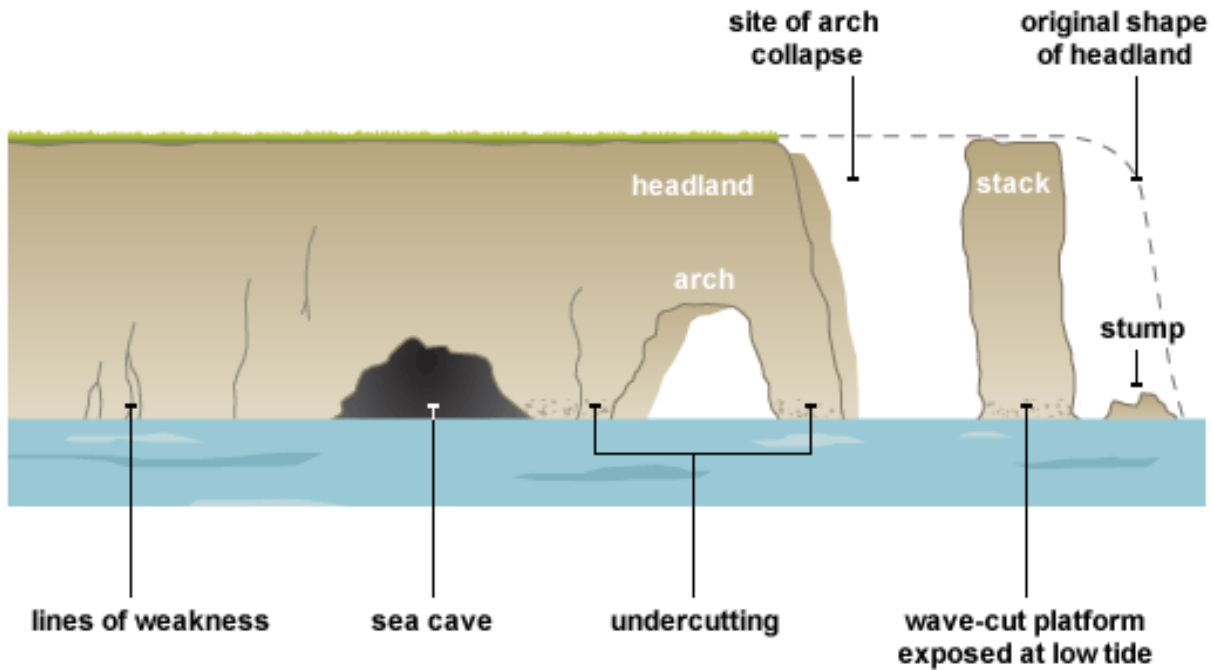
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# 7. To explain the formation of a cave, arch, stack and stump



Example: Old Harry's Rocks, Dorset

Explain the formation of a cave, arch, stack and stump

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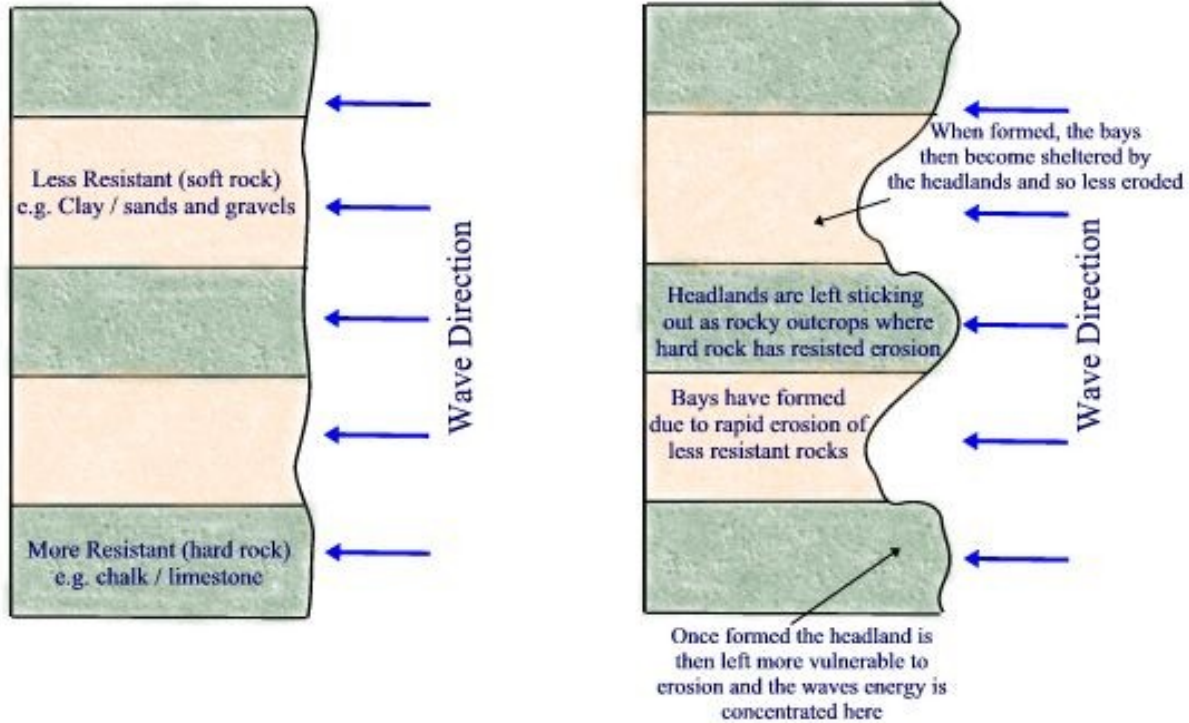
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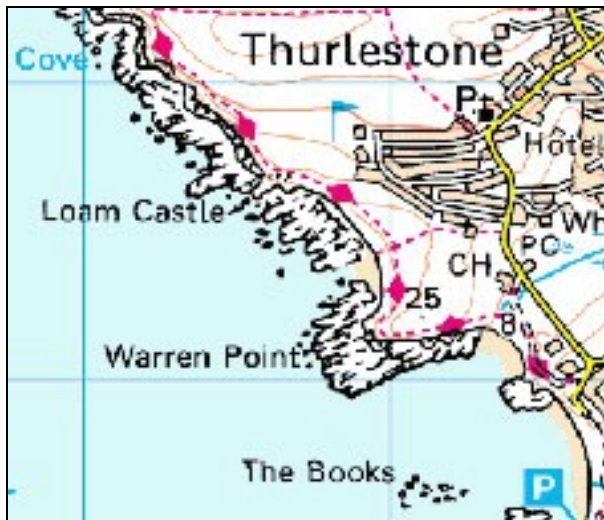
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# 8. To explain the formation of Headlands and Bays

## The Formation of Headlands and Bays



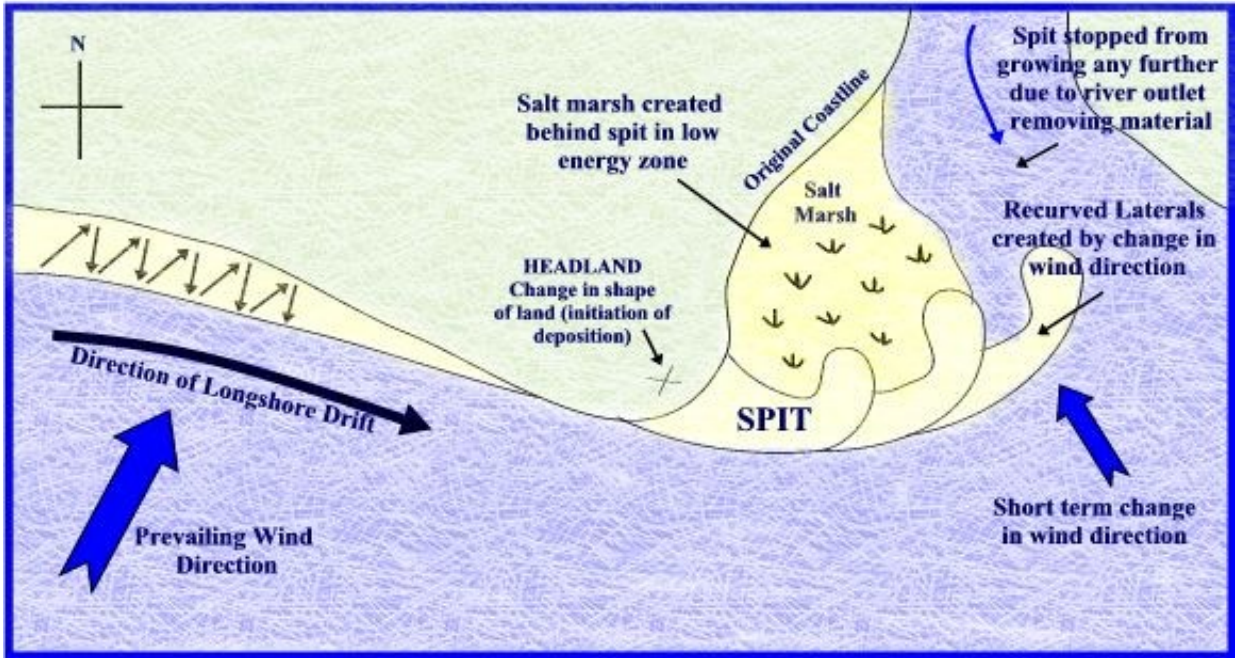
On the map and photograph label the headland and bay:



9. To be able to describe and explain the formation of landforms of deposition: A Spit and a Bar



**The Formation of a Spit**



**Example: Hurst Castle Spit**

Explain the formation of a spit

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What is the difference between a spit and a bar?

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10. To be able to explain the formation of a salt marsh and describe the vegetation that can be found.

**A salt marsh is a muddy seashore with plants on it.**

More formally: A salt marsh may be defined as the vegetation (usually dominated by flowering plants) that occurs on muddy shores between approximately mean high water neap and extreme high water spring tides.



Fill in the key facts about salt marshes:

Location:

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Formation:

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Vegetation:

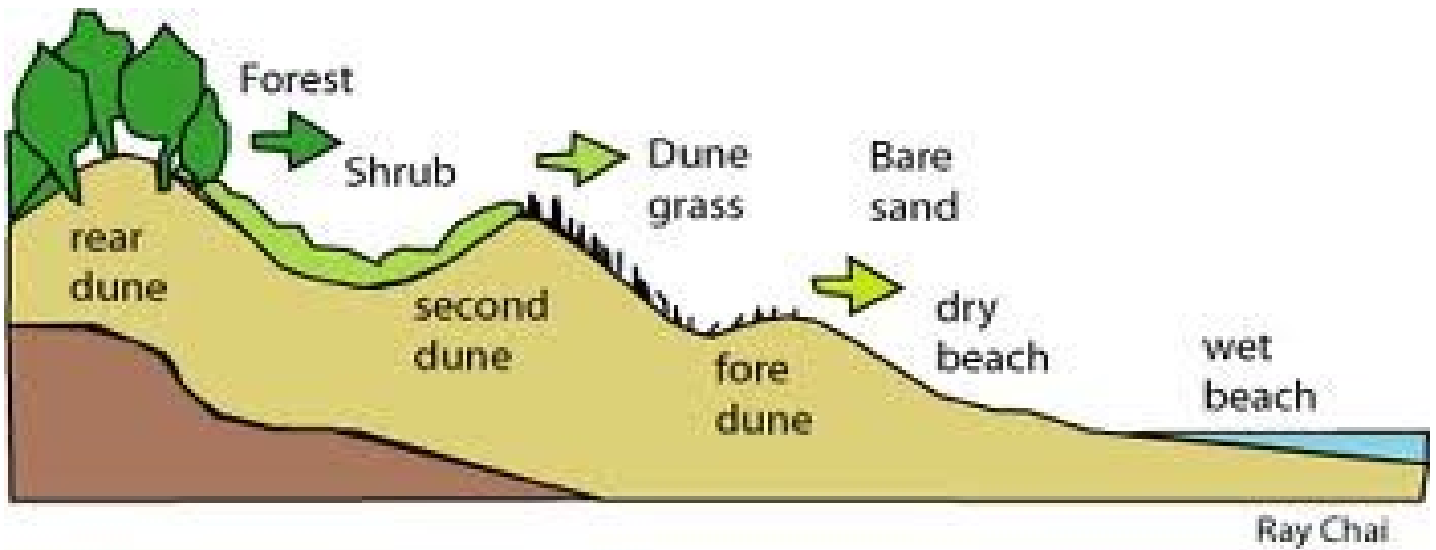
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# 11. To know the succession on SAND DUNES

Add labels to this diagram to show the vegetation and dune types found.

For dune names include labels such as: Embryo dune, yellow due, semi-fixed dune, wet slack, dune slack, fixed dune, dune heathland.

For vegetation include labels like: Lichens, mosses, flowering plants, sea couch, marram grass, small trees (like Willows), Climax trees,





# 12. To know the formation of coral reefs



Describe the differences between the 3 different types of coral reef:

Fringing:

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Barrier:

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Atoll:

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Fill in the key facts about coral reefs:

Location:

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Formation:

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Corals and fish:

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