

Coastal Explorers: Understanding Our Shorelines

Learning objective: To identify key coastal landforms and explain the physical processes of erosion and deposition that shape the UK coastline.

Read each question carefully and use your knowledge of coastal geography to provide detailed answers. Refer to the word bank if you need help with technical terminology.

Finn the dolphin has been mapping the coastline. He has observed how the power of the sea constantly changes the shape of the land through the processes of erosion and deposition. From sturdy cliffs to sandy beaches, the coast is a dynamic environment shaped by the relentless energy of waves.

Word bank: Erosion · Deposition · Headland · Bay · Longshore drift · Arch · Stack · Sediment

1. Finn observes a section of the coast where hard rock sticks out into the sea and softer rock has been worn away. Explain the difference between a headland and a bay. (2 marks)

2. Describe the process of longshore drift. How does this movement of sediment contribute to the creation of a beach? (3 marks)

3. Justify why a cliff made of soft clay might erode faster than a cliff made of hard granite when hit by the same strength of waves. (2 marks)

4. Compare and contrast the formation of an arch and a stack. What might happen to a stack over a long period of time? (3 marks)

5. If you were a coastal manager, explain why you might choose to build sea defences in a village located on a retreating coastline. (2 marks)

Draw: Draw a labelled diagram showing the sequence of a cave turning into an arch, and then a stack. Use arrows to show the direction of wave energy.



Extension challenge: Imagine the sea level rises due to climate change. Write a short paragraph explaining how this would alter the coastal landscape in your local area. Consider the impact on both wildlife habitats and human settlements.