

Finn's Cartography Challenge: Mapping the Coastline

Learning objective: To use four-figure grid references, interpret map symbols, and calculate distances using a scale to navigate coastal environments.

Finn the Dolphin has mapped a beautiful section of the 'Crystalline Coast'. You are the lead explorer! Use the provided map details to identify locations using grid references, interpret the key symbols, and solve the navigation puzzles. For the final task, you must justify your route choices based on the terrain symbols.

Word bank: Grid reference · Scale · Contour lines · Topography · Legend · Compass rose · Equidistant · Cardinal points

1. Finn is at the lighthouse (Grid Square 24, 32). He needs to travel to the rocky cove in Grid Square 26, 35. Explain why Finn must be careful navigating this route by looking at the symbols for height and coastal features. (2 marks)

2. The map scale is 1cm = 1km. If the distance on the map between the sandy beach and the harbour is 4.5cm, calculate the actual distance in kilometres. Show your working out. (2 marks)

3. Compare and contrast the symbols used for a 'foreshore' and a 'cliff'. Why are these distinctions vital for a cartographer? (2 marks)

4. Justify your answer: If you were building a new tourist information centre, would you place it in a square with 'dense forest' or 'flat grassland'? Explain the impact on the local environment. (3 marks)

5. What might happen if a map maker forgot to include a compass rose or a directional arrow? Describe the potential consequences for a traveller. (2 marks)

6. Look at the grid references: A ship is located at 25, 33. If it moves 2 squares North and 1 square East, what is its new four-figure grid reference? (1 mark)

Draw: Draw a map key for Finn's map. Include at least six symbols: a lighthouse, a sandy beach, a forest, a rocky cliff, a harbour, and a public footpath. Ensure your symbols are clear and easy to read.



Extension challenge: Design a 'treasure trail' route for Finn to follow across the map. You must include at least four grid references and write a set of instructions using compass directions (e.g., 'Travel North-East for 2km until you reach the cliff'). Finally, calculate the total cost of the trip if Finn spends £12.50 per checkpoint on supplies.