Finn’s Ocean Mapping Challenge: Grid References Assessment

Learning objective: To demonstrate mastery of four-figure grid references and the ability to interpret map features using coordinates.

Read each question carefully. Use the provided map grid to find your answers. Write your responses in the spaces provided. Ensure you use the correct format for grid references (easting first, then northing).

Finn the dolphin has been busy mapping the coastline of Coral Cove. He has created a grid system to help his friends find important landmarks. The grid covers an area of 5km by 5km. Eastings (the vertical lines) are numbered 10 to 14. Northings (the horizontal lines) are numbered 20 to 24.

[Map Data: 10,20: Sandy Beach | 11,21: Shipwreck | 12,22: Coral Reef | 13,23: Lighthouse | 14,24: Sea Cave]

Word bank: Grid reference · Easting · Northing · Coordinates · Map key · Symbol · Location · Navigate

1. Finn is swimming at the Sandy Beach. Using the grid data provided, identify the four-figure grid reference for this location. (1 mark)

2. What feature is located at the grid reference 13,23? Explain why a lighthouse might be placed at this specific coordinate. (2 marks)

3. If Finn travels from the Shipwreck (11,21) to the Coral Reef (12,22), describe the direction he must swim using compass points (North, South, East, West). (2 marks)

4. Compare and contrast the importance of Eastings and Northings when finding a specific location. Why is it essential to follow the correct order? (3 marks)

5. A new Mermaid statue is placed at 14,22. Plot this on a mental map. If a storm hits the Sea Cave (14,24), justify why the Mermaid statue might be at risk of flooding. (4 marks)

6. Finn wants to build a new rescue station. It must be at least one square away from the Shipwreck for safety. Suggest a grid reference for the station and explain your reasoning, considering geographical features. (3 marks)

7. Imagine you are an explorer creating a new map for Finn. Write a short guide (50-70 words) for a young dolphin explaining how to use a grid reference to find hidden treasure. Include why accuracy is vital in geography. (5 marks)

Draw: Draw a map of a small island on a 5x5 grid. Place three landmarks (a treasure chest, a tall palm tree, and a mountain) in different squares and provide the four-figure grid reference for each one below your drawing.

Extension challenge: Total: /25. Greater Depth Challenge: What might happen to navigation if our grid system was circular instead of square? Discuss the mathematical and geographical implications of changing the shape of our grid lines.