

Finn's Polar Expedition: Explorer's Log

Learning objective: To identify and compare the geographical characteristics of the Arctic and the Antarctic, and to understand the unique adaptations required for survival in extreme cold.

Finn the dolphin has travelled from the temperate oceans to the icy extremes of the North and South Poles. He needs your help to organize his field notes. Read the characteristics below and sort them into the correct column: Arctic, Antarctic, or Both. Then, answer the deeper thinking questions to demonstrate your expertise.

Word bank: North Pole · South Pole · Penguins · Polar bears · Sea ice · Glaciers · Indigenous communities · No permanent human residents

1. Create a table with three columns: Arctic, Antarctic, and Both. Sort the items from the word bank into their correct categories. (4 marks)

2. Explain why polar bears are only found in the Arctic, whilst penguins are predominantly found in the Southern Hemisphere. How does their habitat influence this? (3 marks)

3. Compare and contrast the human presence in both regions. Why is the Arctic inhabited by indigenous communities while the Antarctic is primarily used for scientific research? (3 marks)

4. Justify your answer: If the global climate continues to warm, which region might experience more significant changes to its physical geography? Consider the difference between land-based ice and sea ice. (3 marks)

5. What might happen if the sea ice in the Arctic melted completely during the summer months? Suggest two consequences for the local wildlife. (2 marks)

6. A research expedition costs £4,500 for equipment and £2,750 for travel. If the team has a budget of £8,000, how much money remains for emergency supplies? (2 marks)

Draw: Draw a cross-section of a polar environment. Include one animal adapted to the cold and label two physical geographical features, such as an iceberg, a glacier, or a tundra plain.



Extension challenge: Imagine you are an explorer like Finn. Write a short, persuasive diary entry (no more than 150 words) describing why it is important to protect these fragile ecosystems. Use rich, descriptive vocabulary to capture the beauty of the ice and the vulnerability of the species that live there.