

Exploring the Frozen Frontiers: The Polar Regions

Learning objective: To identify, describe, and compare the key physical and geographical characteristics of the Arctic and the Antarctic.

Read each question carefully. Use your knowledge of geography to provide detailed answers, ensuring you use appropriate geographical vocabulary.

Finn the dolphin has travelled from the warm tropical seas to the icy waters of the high latitudes. He is mapping the differences between the North Pole and the South Pole. Use your geographical knowledge to help Finn complete his report on these extreme environments.

Word bank: Arctic · Antarctic · Tundra · Glacier · Iceberg · Latitude · Precipitation · Biodiversity · Hemisphere · Permafrost

1. Finn is currently at the Arctic Circle. Explain why the Arctic is classified as an ocean surrounded by land, whereas the Antarctic is classified as a continent surrounded by an ocean. (2 marks)

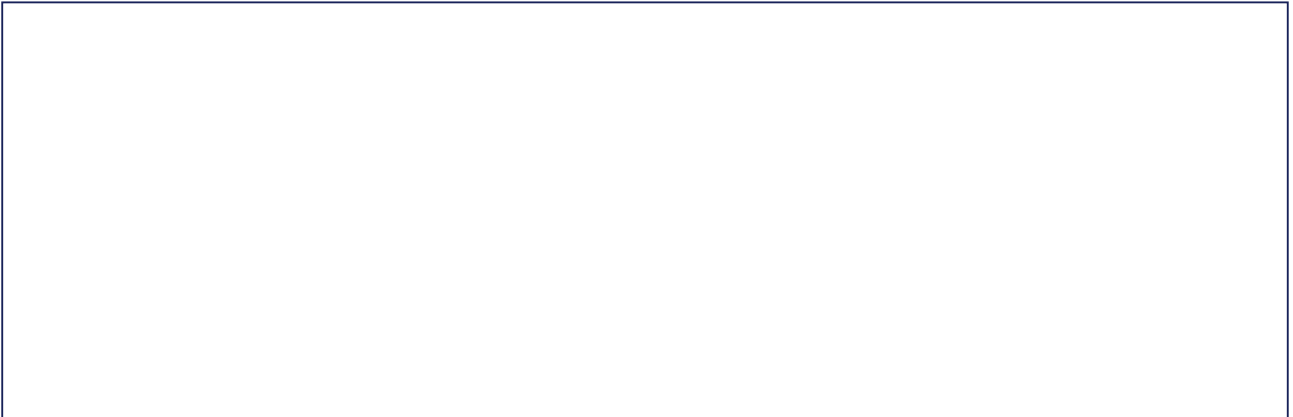
2. Compare and contrast the wildlife found in the Arctic with the wildlife found in the Antarctic. Why do you think certain species are restricted to only one of these regions? (3 marks)

3. The Arctic tundra experiences 'permafrost'. Explain what this is and how it influences the type of vegetation that can grow in the region. (2 marks)

4. Justify your answer: If the global temperature continues to rise, what might happen to the sea levels globally if the ice sheets in the Antarctic melt? (3 marks)

5. Describe the difference between sea ice and an iceberg. How does each form? (2 marks)

Draw: Draw a cross-section of a polar landscape. Label the ice sheet, a glacier, and identify one animal that would be native to that specific region.



Extension challenge: Imagine you are a climate scientist working at a research station in the Antarctic. Write a journal entry describing the challenges of living in such an extreme climate, including how the 24-hour sunlight during the summer affects your daily routine.