

Exploring the Frozen Frontiers: The Polar Regions

Learning objective: To understand the physical and geographical characteristics of the Arctic and the Antarctic.

Read the text carefully and answer the questions below. Use full sentences where appropriate.

Finn the dolphin has travelled far from his warm reefs to study the Earth's coldest places. He has learned that the Polar Regions, found at the top and bottom of our globe, are extreme environments. The Arctic, located in the north, is a vast ocean covered by a thin layer of sea ice, surrounded by treeless land known as the tundra. In contrast, the Antarctic in the south is a massive, high-altitude continent covered by a thick ice sheet. Because of their high latitude, these regions receive little direct sunlight, resulting in freezing temperatures year-round. Despite the harsh conditions, these areas are home to a fragile ecosystem. Animals like polar bears in the north and penguins in the south have adapted to survive the biting cold. Finn notes that the ice here plays a vital role in regulating the planet's temperature by reflecting sunlight back into space. However, these icy landscapes are changing, as rising global temperatures cause the ice to melt. Protecting these unique, frozen frontiers is essential for the health of our entire world.

Word bank: Arctic · Antarctic · glacier · tundra · latitude · permafrost · ecosystem

1. Identify two physical differences between the Arctic and the Antarctic mentioned in the text. (2 marks)

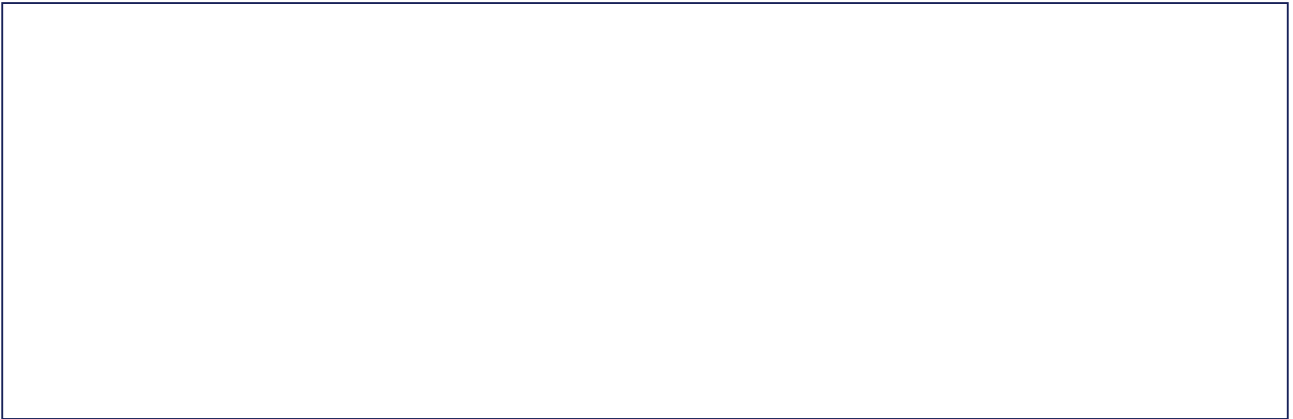
2. According to the text, what is the main reason these regions have such cold temperatures? (2 marks)

3. Why might Finn describe the polar ecosystem as 'fragile'? (2 marks)

4. Explain how the ice in the Polar Regions helps the rest of the planet. (2 marks)

5. Do you think humans should be allowed to build tourist hotels in the Antarctic? Give a reason for your opinion. (2 marks)

Draw: Draw a split-screen illustration showing the Arctic on the left and the Antarctic on the right, including one animal you would find in each location.



Extension challenge: Research one animal that lives in the Arctic and one that lives in the Antarctic. Create a fact file comparing their diets and how they keep warm in the freezing temperatures.