

# Finn's Polar Expedition: Understanding Earth's Frozen Frontiers

*Learning objective: To identify, describe, and compare the key features of the Arctic and Antarctic regions, including their climate, wildlife, and geographical significance.*

Read the front of each card to test your geographical knowledge. Flip to check your answer and ensure you understand the unique characteristics of our planet's polar zones.

Which polar region is located at the South Pole and is a landmass covered by a massive ice sheet?

Antarctica.

What is the name of the frozen ground that remains at or below 0°C for at least two consecutive years?

Permafrost.

Explain why the Arctic is considered an ocean surrounded by land, whereas Antarctica is a continent surrounded by an ocean.

The Arctic is a semi-enclosed ocean basin; Antarctica is a landmass located at the South Pole.

What is the term for a large, slow-moving mass of ice formed by the accumulation and compaction of snow on mountains or near the poles?

A glacier.

Compare and contrast the wildlife of the Arctic and the Antarctic.

Arctic regions feature animals like polar bears and arctic foxes, while the Antarctic is home to penguins and seals. Neither region shares these specific terrestrial predators and prey naturally.

What are the 'lines' that measure distance north or south of the Equator, which help define the location of the Polar Circles?

Latitude.

Justify why the polar regions are essential for regulating the Earth's global climate.

The polar regions reflect sunlight back into space due to their high albedo (reflectivity), helping to keep the planet cool.

What might happen to sea levels globally if polar ice sheets continue to melt at an accelerated rate?

Sea levels would rise, potentially causing flooding in low-lying coastal regions and altering ocean currents.

Define the term 'tundra' and describe the types of vegetation found there.

The tundra is a vast, treeless biome where the subsoil is frozen; vegetation includes mosses, lichens, and low-growing shrubs.

What is the primary difference between an iceberg and a glacier?

A glacier is a land-based ice formation, while an iceberg is a large piece of freshwater ice that has broken off (calved) from a glacier and is floating in the sea.

Explain why the sun barely rises during the 'Polar Night' in the Arctic Circle.

Because of the Earth's axial tilt, the North Pole is tilted away from the Sun during the winter months, resulting in 24-hour darkness.

If you were planning an expedition, why would it be crucial to study the 'albedo effect'?

It helps scientists understand how much solar radiation is reflected by ice, which is a key factor in predicting how quickly polar regions might warm.