

Y5 Knowledge Organiser Geography: Arctic and Antarctic – Polar Biomes

What you should already know



The **equator** is an imaginary line that divides the Earth in half. The equator is an equal distance between the North and South Poles.

The weather on the equator is hot all year round.

The **tropics** are the only part of the earth where the sun shines directly downwards

The **tropic of Cancer** is an imaginary line in the northern hemisphere.



The **tropic of Capricorn** is an imaginary line in the southern hemisphere.



Biomes are areas of our planet with similar climates, landscapes, animals and plants. What lives in each biome depends on:
 how **warm or cold** it is
 how **dry or wet** it is
 how **fertile** the soil is



Arctic

The **Arctic**, a cold desert, is located at the northernmost part of our planet. Scientists usually define the Arctic as the area above the 'Arctic Circle' — an imaginary line that circles around the top of the globe.

The Arctic consists of the Arctic Ocean and parts of Canada, Russia, the USA, Greenland, Norway, Finland, Sweden and Iceland

Despite the freezing-cold temperatures, approximately four million people call this wintery wonderland home! Amongst these are the indigenous people of the Arctic, called the 'Inuits'.

In 1958, a submarine sailed beneath the frozen ice of the Arctic Ocean. This was proof that the enormous ice sheet rests on water and not land.

The Arctic is home to lots of wonderful wildlife, including polar bears, Arctic foxes, walruses, seals and whales!

The ice of the Arctic contains around ten percent of the world's fresh water. This giant, white, frozen reservoir reflects sunlight, helping keep the region cool. It also plays a super-important role in keeping our global climate stable.

Key Vocab

Northern hemisphere	Everything north of the Equator
Southern hemisphere	Everything south of the Equator
Tropics	The only part of the earth where the sun shines directly downwards.
Tropic of Cancer	An imaginary line which marks the northern edge of the tropics
Tropic of Capricorn	An imaginary line which marks the southern edge of the tropics
Indigenous	
Biome	Areas of our planet with similar climates, landscapes, animals and plants.
Arctic	The area around the Earth's North Pole
Antarctic	The area around the Earth's South Pole
Tundra	The coldest of all the biomes



Arctic Photo

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Antarctic

Antarctica is located in the southernmost part of the planet. According to size, Antarctica is the fifth largest continent of our planet. The South Pole is near the middle of Antarctica.

Antarctica is the driest continent of the seven continents. Antarctica is an icy desert with very little rainfall throughout the year.

Antarctica is an ice covered continent surrounded by the Southern Ocean. Almost all of the continent's land is covered by a thick layer of ice.

Antarctica is the windiest place on the earth where windspeeds of more than 350 kilometres per hour/218 miles per hour have been measured.

Antarctica is the least populated continent. There are no residents living permanently here. Only around 1,000 people (in winter) and 10,000 people (in summer) live on the continent. These people are mainly based there for one year to live and work in the research stations. The research stations are scattered all around the continent.

The few areas where there is no or only little ice throughout the year are located in the most northern parts of the continent. There one will find also the typical **tundra** vegetation.

There are not many species living on the Antarctic continent. Whales, and seals live in the Southern Ocean surrounding Antarctica. The Emperor penguins are the only penguin species breeding on Antarctica.



Shackleton and some of his team in Antarctica



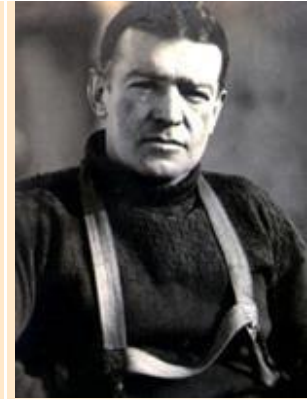
South Pole



Emperor penguins

Ernest Shackleton

Shackleton was an Anglo-Irish Antarctic explorer, best known for leading the 'Endurance' expedition of 1914-16. In 1901, he went on his first Antarctic expedition, aged just 25.



Shackleton's second expedition was in 1907. Despite terrible weather conditions and a treacherous journey, Shackleton and his team managed to come within 180km of the South Pole before turning back on 9th January, 1909.

In 1914, Shackleton made his third trip to the Antarctic with the ship 'Endurance'. Early in 1915, 'Endurance' became trapped in the ice, and ten months later sank. Shackleton's crew had already abandoned the ship to live on the floating ice. In April 1916, they set off in three small boats, eventually reaching Elephant Island. Taking five crew members, Shackleton went to find help. In a small boat, the six men spent 16 days crossing 1,300 km of ocean to reach South Georgia and then trekked across the island to a whaling station. The remaining men from the 'Endurance' were rescued in August 1916. Not one member of the expedition died.