

Frozen Kingdom

Welcome to the planet's coldest lands... vast wilds, hostile territories, incredibly beautiful yet often deadly. Take shelter from the elements or fall prey to icy winds and deepest chill. Trek bravely and valiantly across treacherous terrain to the ends of the Earth, treading deep in snow or pulled by a team of mighty sled dogs. Be alert, for magnificent mammals roam these lands, sometimes hungry or fresh for a fight. Perhaps a hungry polar bear or an arctic fox; hunting rodents and swift as the wind.

Key facts

- There are no land-dwelling mammals in the Antarctic although the Arctic has many land-dwelling mammals include musk ox, reindeer, caribou, fox, hare, wolf, lemming and bears.
- The seas of the Antarctic and the Arctic both have marine mammals.
- Above the Arctic Circle, there is all-day sunshine in the summer for at least one day a year (and there's a full 24 hours of darkness on at least one day too!)
- Climate change is the polar bears' biggest threat. Every year, global warming means sea ice melts earlier and reforms later giving polar bears reduced hunting time.
- The classification of lifeforms is called *taxonomy*. Linnaeus classified living things by looking for similarities.

Carl Linnaeus

Carl Linnaeus is famous for his work in Taxonomy, the science of identifying, naming and classifying organisms (plants, animals, bacteria, fungi and microorganisms.) In addition to creating this system, he named 7,700 plants and 4,400 animals. He used Latin and Greek in this system because those languages were taught around the world, and are still used today.



Key Vocabulary

Fungi-plants that have no flowers, leaves, or green colouring, such as a mushroom or a toadstool. Other types of fungus such as mould are extremely small and look like a fine powder.

Mushroom-fungi that you can eat

Toadstool-a fungus that you cannot eat because it is poisonous

Fermentation-a chemical change that happens in vegetable and animal substances.

Microbe-a very small living thing, which you can only see if you use a microscope.

Bacteria-very small organisms. Some bacteria can cause disease.

Species-a class of plants or animals whose members have the same main characteristics and are able to breed with each other.

Organism-an animal or plant, especially one that is so small that you cannot see it without using a microscope.

Flora-You can refer to plants as flora, especially the plants growing in a particular area.

Fauna-Animals, especially the animals in a particular area, can be referred to as fauna.

Vertebrate-a creature which has a spine. Mammals, birds, reptiles, and fish are vertebrates.

Invertebrate-a creature that does not have a spine, for example an insect, a worm, or an octopus.

Mammal-animals such as humans, dogs, lions, and whales. In general, female mammals give birth to babies rather than laying eggs, and feed their young with milk.

Bird-a creature with feathers and wings. Female birds lay eggs.

Amphibian-animals such as frogs and toads that can live both on land and in water.

Reptile-a group of cold-blooded animals which have skins covered with small hard plates called scales and lay eggs. Snakes, lizards, and crocodiles are reptiles.

Fish-a creature that lives in water and has a tail and fins.

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Key facts

- The Antarctic is a continent surrounded by ocean. The Arctic is an ice-covered ocean surrounded by continents.
- Antarctica is the Southern-most continent on Earth.
- The word 'arctic' comes from the Greek word, 'arktikos', or 'country of the great bear'.
- Antarctica is the driest, windiest, emptiest and coldest place on Earth.
- The Arctic has a wealth of natural resources, including fish, oil, gas and minerals.
- Above the Arctic Circle, there is all-day sunshine in the summer for at least one day a year (and there is a full 24-hours of full-day darkness for at least one day too!)
- Extreme cold weather may result in injuries such as frostbite and hypothermia.

Robert Falcon Scott

Captain Robert Falcon Scott was a British Royal Navy officer and explorer who led two expeditions to the Antarctic regions: the Discovery Expedition (1901–1904) and the ill-fated Terra Nova Expedition (1910–1913). On the first expedition, he set a new southern record by marching to latitude 82°S and discovered the Antarctic Plateau. On the second venture, Scott led a party of five, which reached the South Pole on 17 January 1912. On their return journey, Scott's party discovered plant fossils, proving Antarctica was once forested and joined to other continents. A planned meeting with supporting dog teams from the base camp failed, despite Scott's written instructions, and at a distance of 150 miles from their base camp and 11 miles from the next depot, Scott and his companions perished.



Key Vocabulary

Antarctica-a continent around the South Pole

Aurora Australis- also known as the southern lights, a natural light display in the Earth's sky

Aurora Borealis-also known as the northern lights, a natural light display in the Earth's sky

Climate-the general weather conditions that are typical of a place.

Continent-a very large area of land, such as Africa or Asia that consists of several countries.

Cores-The core of an object, building, or city is the central part of it.

Cryosphere-The frozen portions of the Earth's surface water (or hydrosphere), including: oceans, lakes, rivers, snow cover, glaciers, ice caps, ice sheets, and frozen ground (permafrost).

Glaciers-an extremely large mass of ice, which moves very slowly, often down a mountain valley.

Habitats-The habitat of an animal or plant is the natural environment in which it normally lives or grows.

Iceberg-large tall mass of ice floating in the sea.

Ice caps- thick layers of ice and snow that cover the North and South Poles.

Ice sheets-a large thick area of ice, especially one that exists for a long time.

Migrating-moving from one place to another, especially in order to find work or to live somewhere for a short time.

North Pole- Northern end of the Earth's axis

Permafrost-land that is permanently frozen to a great depth.

Polar habitats- habitats that are located at the very top and very bottom of the Earth. They are cold, windy and have a lot of snow and ice

Regions-A region is a large area of land that is different from other areas of land

Southern hemisphere-that half of the earth lying south of the equator

South Pole-The *South Pole* is the *southern* end of Earth's axis.

Tundra-one of the large flat areas of land in the north of Europe, Asia, and America. The ground below the top layer of soil is always frozen and no trees grow there.