

Year 4

The Arctic – Knowledge Organiser



Life in the Arctic. How is it different to the UK?

Key Vocabulary

Arctic Circle – centred around the North Pole including areas such as Canada, Russia, Finland, Sweden, Norway, Iceland, Greenland and parts of the USA.

Antarctic Circle – a line of latitude located at the bottom of the globe

Biodiversity – the variety of plant and animal life in a habitat

Eco System – animals and plant life which grow in a particular climate

Global Warming – the rise of the Earth's temperature

Inuit – a group of individuals who live in polar regions

Biome – a type of climate

Climate – the weather conditions in a particular area

Arctic Tundra – a lack of tree growth due to extremely cold temperatures

Adaptation – humans and animals have characteristics which help them live in an extremely cold climate

Polar Regions – an area around the North and South Pole

A map of the location of the Arctic, Arctic Ocean and The North Pole.



Significant Individuals



Mountaineer and Explorer

Edmund Hillary



Mountaineer

Tenzing Norgay



Explorer

Ernest Shackleton

The Arctic Tundra

What is the Climate Like?

It is usually cold, dry and windy and depending on the time of year, a tundra is usually covered in varying amounts of snow. Its climate is classified as subarctic and polar, however, the temperature can change dramatically between summer and winter. The average temperatures in the summer are around 12° C. The winter temperatures can reach below -30° C. A tundra also has very little precipitation.

When the snow melts, tough grasses, mosses, lichen, heath and small shrubs grow. They have a short, quick-growing season.

Although the climate is very cold, tundra is the habitat for many animals, including snowy owls, brown bears, Arctic hares, Arctic wolves, lemmings, polar bears, reindeer, Arctic weasels and caribou.

Brown bears roam the tundra regions of Alaska, Canada and parts of Russia. In winter, it digs a den in the ground and hibernates.

The Arctic hare grows a white coat in winter, which provides excellent camouflage in the ice and snow. In spring, the hare's colours change to blue-grey to blend in with the rocks and vegetation. It has sharp claws to help dig through the frozen ground to find food. Arctic hares sometimes dig shelters in snow and huddle together to share warmth.

Who Lives in the Tundra Biome?

Several native groups live in the tundra biome and have done for thousands of years. Some of these groups include the Inuit, Yupik, and Aleut.

Inuit from the Northern regions of Canada live a traditional and sustainable lifestyle, which is adapted to the freezing temperatures. They hunt and fish just enough food for survival including birds, seals, walrus and whales.



Are there any other Threats to Tundra Regions?

Polar ice caps are melting because of an increase in global warming. This is causing sea levels to rise and low-lying coastal areas to flood.

Climate change is causing an imbalance in the ecosystems of the tundra's fragile environment. The plants and animals found there have made some incredible adaptations to survive in the harsh climate, but the smallest changes can disrupt the eating and hunting patterns of animals.

Industries, such as the mining, oil, and gas industries can also cause problems in tundra regions. Problems include oil spills, pollution from mining and oil drilling and damage to the tundra landscape from bulldozers.

