#### LI: To research a geographical region.

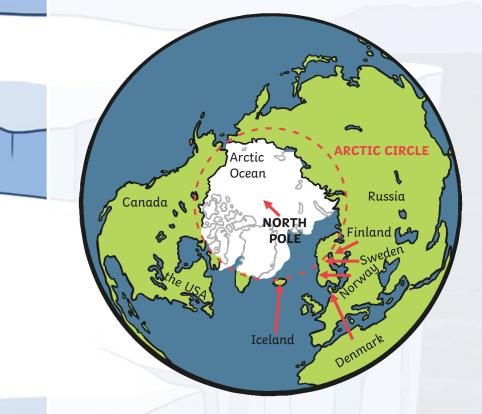
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#### Where Are the Polar Regions?



#### **The Arctic**

The Arctic is at the very top of the Earth. It includes the areas around the North Pole. The Arctic isn't a country or a continent. It is actually mostly a frozen ocean.



The Arctic includes parts of lots of different countries. These include Norway, Finland, Sweden, Russia, the USA, Canada, Denmark and Iceland. It also includes the Arctic Ocean.

This whole area is known as the **Arctic Circle**.

## **Climate in the Arctic**

The Arctic only has two seasons. It has long, cold winters and short, cool summers. The winters last for about 8 months.



In the winter, the sun is so far away from the Arctic that it doesn't rise at all. This means it can be cold and dark for months.

The average temperatures in the Arctic range from about 12°C in the summer to about -34°C in the winter.

What do you think it would be like if you didn't see the sun for months?

# **Physical Features in the Arctic**

There are lots of different physical features in the Arctic. These include:



Most of the Arctic, however, is covered by water and most of that water is frozen. Some of these physical features, such as glaciers and icebergs, help to make up 20% of Earth's freshwater.





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## Humans in the Arctic

People have lived in the Arctic for thousands of years. Only about 4 million people live and work in the Arctic at the moment (for comparison, there are 66 million in the UK).

In the winter, it can get so cold that it's too dangerous to go outside without special clothing and equipment. Strong storms and blizzards can make travel very difficult and heating a home can be expensive without trees for a fire.

Mining for oil and gas, and fishing are important activities in the Arctic.



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What do you think it would be like to live in the Arctic?

# **Polar Adaptations**

There are lots of different animals that live in the polar regions. They all have special adaptations (skills or features they have developed) which allow them to live in such cold temperatures.

Many of these animals, such as seals and penguins, have a special layer of fat under their skin, called blubber. This helps to insulate their bodies and keep the heat in. They may also have thicker layers of fur.

Some of them have special adaptations on their feet, such as fur or sharp claws, to help them grip the slippery ice. They may also have wide or webbed feet to keep them from sinking in the snow. a reindeer's thick coat



a penguin's sharp claws and webbed feet



"Penguin Feet" by Jon Rawlinson is licensed under <u>CC BY 2.0</u>

## **Arctic Animals**

The Arctic covers area of Europe, North America and Asia. Because of this, there are lots of different types of animals here.

Arctic foxes have short ears and noses to limit how much of their body is exposed to the cold. They live in burrows underground to keep them warm. Their fur turns white in winter so they are camouflaged against the snow. **Polar bears** have a thick coat and a layer of blubber to keep them insulated. They even have fur on their paws. This helps to protect them from cold surfaces and also lets them grip the ice. Walruses have long tusks. They use them for pulling themselves out of the water and to break breathing holes in the ice when they are underwater. They also have a very thick layer of blubber.







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## **Arctic Animals**

Harp seals spend very little time on land and most of their time in the water. They can stay underwater for up to 15 minutes! They eat mostly fish. **Snowy owls** have very good eyesight and hearing. This helps them to spot their prey in the snow. They have mostly white feathers which help to camouflage them. **Reindeer** have thick coats which keep them insulated. In fact, if a reindeer lies down, the snow underneath it won't even melt! Their hooves also have fur on the bottom to keep them from slipping. Lynxes have special paws. As they walk, their toes spread out, which stops them from sinking in deep snow. They have very good eyesight, which makes them excellent predators.





Snowy Owl" by Jongsun Lee is licensed under CC BY 2.0





"Lynx Canadensis" by Keith Williams is licensed under CC BY 2.0

## **Quick Facts About the Arctic**

There are about 10 cities in the Arctic. Travel in the Arctic relies on icebreakers. Icebreakers are giant powerful ships which break up miles of sea ice, sometimes metres thick.



The Arctic Ocean is larger than the continent of Europe, but it is the smallest ocean in the world.

In 1958, a submarine called the USS Nautilus sailed under the frozen ice of the Arctic Ocean. This was proof that the Arctic ice sits on water and not on land.

There are no penguins in the Arctic. Grey whales travel 12,500 miles every year from the Arctic to Mexico during the winter.

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