

Dear Parents,

Our next topic is 'Antarctica.' Please help your children to prepare for this topic by helping them to learn the key words (in purple) and the facts on this sheet.

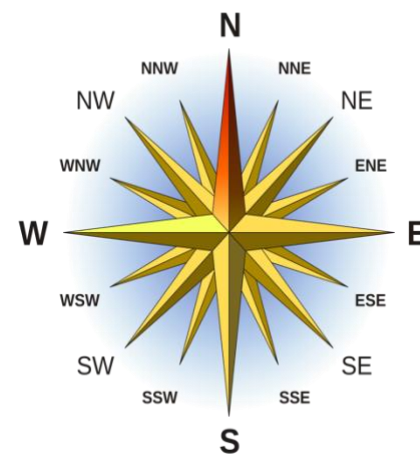
There are some homework activities on the back of this sheet. Your child can complete these at any time. Your child's teacher would love to see what they have created, so please send any completed homework into school for us to display.

Thank you for your support.



ANTARCTICA

Year 4 – Geography/History Topic 4

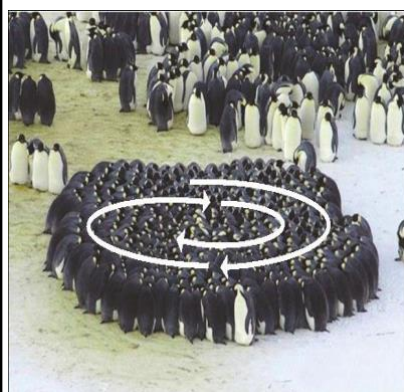


Animals in Antarctica



How penguins stay warm

Most penguin species engage in a customary huddle to keep warm. This moves so each penguin can spend time both outside and inside of this. The huddle helps them to share each other's body warmth.



Flora (Plant life)

Most of Antarctica's plants are found on the Antarctica Peninsula (NWN part of the map above). These include mosses, fungi, lichens and two flowering plants (Antarctic hairgrass and Antarctic pearlwort).

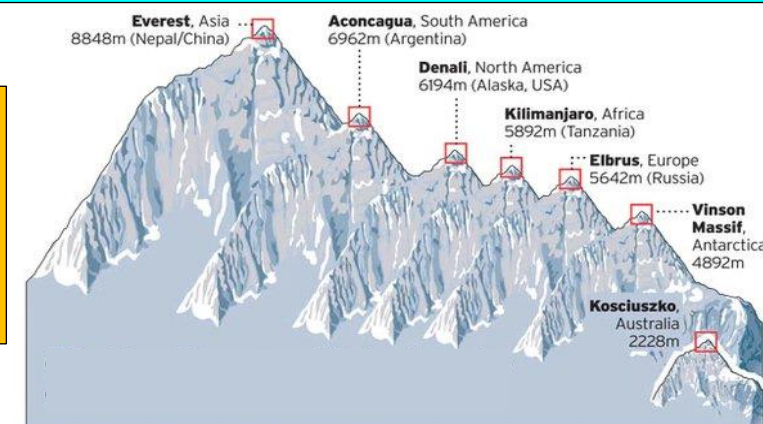
KEY VOCABULARY AND SPELLINGS

- Continent** – a very large landmass.
- Ernest Shackleton** – A polar explorer
- Expedition** – a journey undertaken by a group of people with a particular purpose.
- Ice sheet** – a layer of ice covering a large piece of land
- Glacier** – a river or large mass of ice formed by packed-down snow.
- Desert** – a region with very little rainfall
- Hemisphere** – a half of the Earth divided by the equator
- Climate** – the average weather over a period of time
- Navigate** - plan and direct the course of a ship
- Mountainous** – having many mountains

Facts about Antarctica

- While the names Arctic and Antarctica are similar, they have very different meanings. The name Arctic comes from the Greek word arktos, meaning "bear." In contrast, the word anta means anti, which means "opposite", translating Antarctica as "opposite bear".
- Antarctica is the fifth largest **continent** (based on size) but it has no countries or cities. It has the smallest population of any **continent**, around 1,000 people in the winter and 10,000 people in the summer. These are scientists who carry out experiments to find out more about climate change and how this is impacting the icy areas and **glaciers** of Antarctica.
- Under much of Antarctica there is land. Under the Arctic it is just sea.
- Antarctica is the driest and coldest **continent** on Earth (on average 20°C colder than the Arctic). The coldest temperature recorded here was -89.2°C. It is also the windiest place on Earth. Winds can reach 218mph!
- Biomes: The major biome in Antarctica is icy **desert**.
- 98% of Antarctica is covered by ice. 90% of the world's ice is located in Antarctica, which also makes 60-70% of the world's freshwater supply.
- Antarctica is divided into three main parts: East Antarctica (biggest part); West Antarctica; Mountain Range (called the Transantarctic Mountains).
- The highest mountain on Antarctica is Mount Vinson - 4,900 metres/16,000 ft.
- While the exact numbers of volcanoes in Antarctica is unknown, scientists have discovered 138 in Western Antarctica alone. Currently only two volcanoes are active.

The tallest mountain on each continent



Expeditions to Antarctica - The First to the South Pole

After several failed attempts to be the first person to reach the South Pole, in 1910, Captain Robert Falcon Scott and his team of 12 men (the Terra Nova Team) set up camp on Antarctica. They wanted to be the first there to represent the United Kingdom.

Unfortunately, when they arrived they learnt that a rival team of Norwegian explorers, led by Roald Amundsen were also camped on Antarctica to. The race was on to see who would be the first.

On 17th January 1912, Scott and five of his team reached the South Pole (the other seven had returned to base along the way). There was just one problem... the Amundsen Expedition had beaten them. They had arrived on 14th December, 1911 (over a month earlier) and planted the Norwegian flag.

Scott's Terra Nova team planted the British flag and returned home. Unfortunately, nobody from Scott's team survived the return journey to base.



Climate Change

The world is getting warmer and most scientists believe that this is due to human activity, such as burning fossil fuels like coal, gas and oil.

Over the last 50 years, the west coast of the Antarctic Peninsula has been one of the most rapidly warming parts of the planet (+3°C). This warming is not only restricted to the land but can also be noted in the Southern Ocean (+1°C).

The warming of the Peninsula and the melting of ice, snow, **glaciers** and **ice sheets** is effecting wildlife:

- Where penguin colonies live has changed;
- Some penguin species have declined in population e.g. emperor penguins have declined by half in places;
- More plants are being found on the Antarctic Peninsula;
- Antarctic krill is declining. This is an important part of the food chain as it is eaten by many other ocean animals.

Although Antarctica is many thousands of miles away, changes here effect the world. Due to melting ice and snow, satellite measurements since the early 1990s show that sea levels are rising at a rate of 3mm per year. This may eventually lead to the flooding of many coastal areas and whole islands being lost under the world's oceans.

Ernest Shackleton

Ernest Shackleton had made two **expeditions** to be the first person to reach the South Pole, both of which had been unsuccessful. Upon hearing that Amundsen have beaten Scott, he did not give up. He decided to set himself a new goal. He wanted to be the first person to cross the entire **continent** in one expedition.

In 1914, with a new team, he began his **expedition** on board a ship called Endurance. This would be his most famous **expedition**. In early 1915, disaster struck as his ship became trapped in ice. **Shackleton** and his men had to abandon his ship and they had to live on the ice. As their food ran out, they had to eat seal, penguins and their dogs.

In the spring of 1916, the ice began to thaw and **Shackleton** and his team boarded small boats and headed for nearby Elephant Island. But when they arrived, they realised the island was deserted.

Shackleton and five men took a small lifeboat and headed to South Georgia (800 miles away), leaving everybody else behind. After 17 days, they arrived at South Georgia and they were able to organise a rescue mission for the other men.

Shackleton and his team were on the ice for almost two years, but thanks to Shackleton's bravery and heroic actions, in what seemed like a hopeless situation, nobody died.



Huge icebergs occasionally break free from Antarctica and begin drifting in the sea where they melt. The diagram below shows the size of one such iceberg which broke free in 1986. It was bigger than the whole of London!



Homework Ideas:

1. Create a paper mache iceberg.
2. Research the events that happened in 1910 with Scott's Terra Nova Team, when the British attempted to find the South Pole and present your findings to the class - a poster, a PowerPoint presentation, a model etc.
3. Write a newspaper about Scott finishing second in his expedition to the South Pole.
4. Make a model of Skackleton's ship, the Endurance.
5. Draw and paint a picture of an iceberg.
6. Create a board game about exploring Antarctica.
7. Draw a portrait of Shackleton, Amundsen or Scott.
8. Create a fact poster for a famous Antarctic Explorer.
9. Draw/paint a map of Antarctica.

