

Dear Parents,

Our next topic is Extreme Earth - Weather and Natural Disasters . 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.

Thank you for your support.

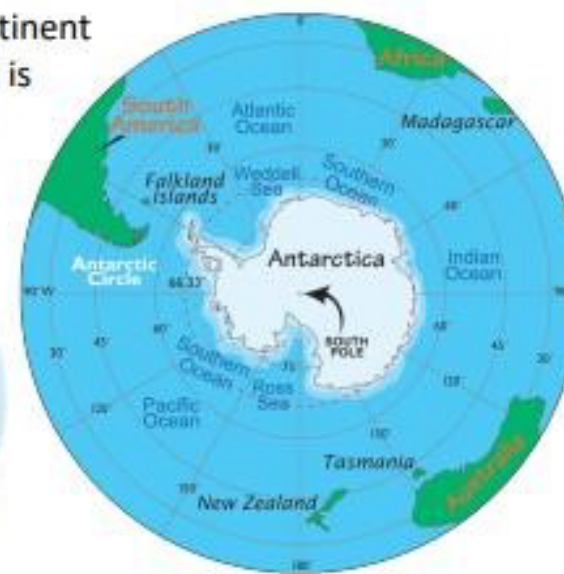
Kind regards
Year 4 teachers



Year 4 – Spring Term



LOCATION – Antarctica is the southernmost continent on Earth located in the southern hemisphere and is surrounded by the Southern Ocean. It covers a huge area, about 14 million square kilometres.



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



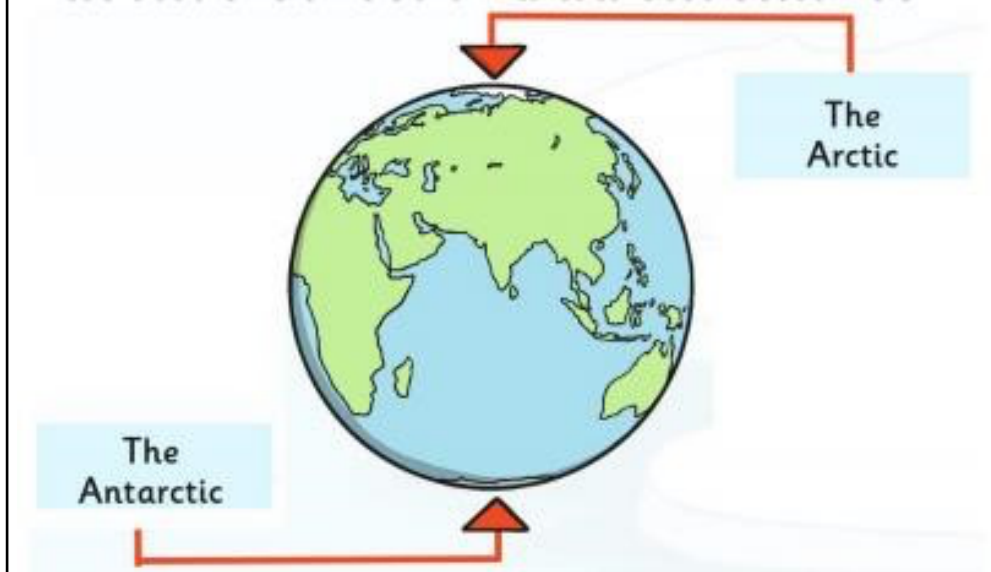
Did you know that polar bears and penguins live in different hemispheres? Polar bears live in the Arctic, whereas penguins live in Antarctica.

Facts about Antarctica

- * Antarctica is the fifth largest continent (based on size) but it has the smallest population of any continent.
Why do you think the population is the smallest?
Can you find out the population?
- * Antarctica has no countries or cities. There are however a few base camps for explorers, scientists and the military.
- * Scientists do many experiments in Antarctica to find out more about climate change and how this is impacting the icy areas of Antarctica.
- * Antarctica is the driest and coldest continent on Earth.
 - * Area: It has an area of 5, 400,000 square miles!
 - * Biomes: The major biomes here are icy desert.
 - * 98% of Antarctica is covered by ice.
 - * It has a mountainous terrain.
- * Antarctica is divided into three main parts: East Antarctica (the biggest part); West Antarctica and the Mountain Range (known as the Transantarctic mountains).

The Polar Regions

The Polar regions are made up of the Arctic and Antarctica. The Arctic is at the North Pole and Antarctica is at the South Pole.



Antarctic Wildlife



Leopard seal



Emperor penguin



Chinstrap penguin



Gentoo penguin



Macaroni penguin

Famous Polar Explorers

Captain Robert Falcon Scott

Captain Scott led two expeditions to Antarctica. The first took place 1901-1904. In 1910 he sailed away to begin his second expedition. During his expeditions he wanted to find out more about the animals, the weather and the land of Antarctica. Scott and his team also wanted to be the first to reach the South Pole.



Sir Ernest Shackleton



Sir Ernest Shackleton and his crew set off in 1914 with the hope of being the first explorers to cross Antarctica. Sadly, their ship (called 'Endurance') became trapped in ice and they had to sail a small lifeboat for 800 miles!

Volcanos in Antarctica

Scientists have discovered 91 volcanoes underneath the Antarctic ice. There are also a number above the ice. Many of these are active volcanoes.

Can you find the names of the two tallest in Antarctica?

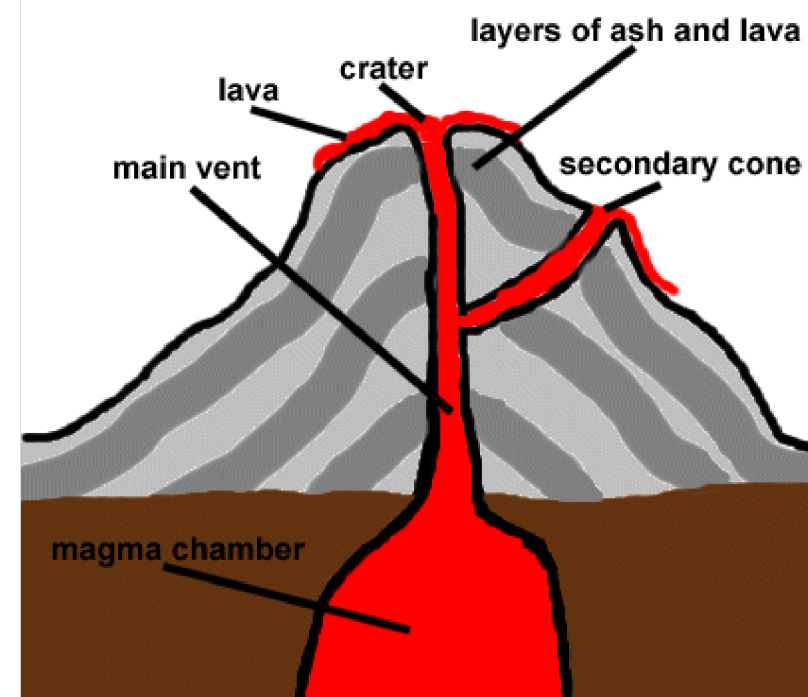
The world's most active volcanoes

- Mount Vesuvius, near Naples, Italy
- Krakatoa, Indonesia
- Mount St. Helens, Washington, USA
- Mount Tambora, Indonesia

Expeditions to Antarctica

In the early 20th Century, the race was on to be the first people to get to the South Pole. Captain Robert Falcon Scott and his crew of 4 men wanted to be the first there to represent the United Kingdom. Unfortunately, they faced unexpected, harsh weather conditions that put them off track. At the same time, a team of Norwegian explorers, led by Roald Amundsen, managed to achieve their goal. Since then, many explorers from around the world, have attempted to discover more.

A simple cross section of a volcano



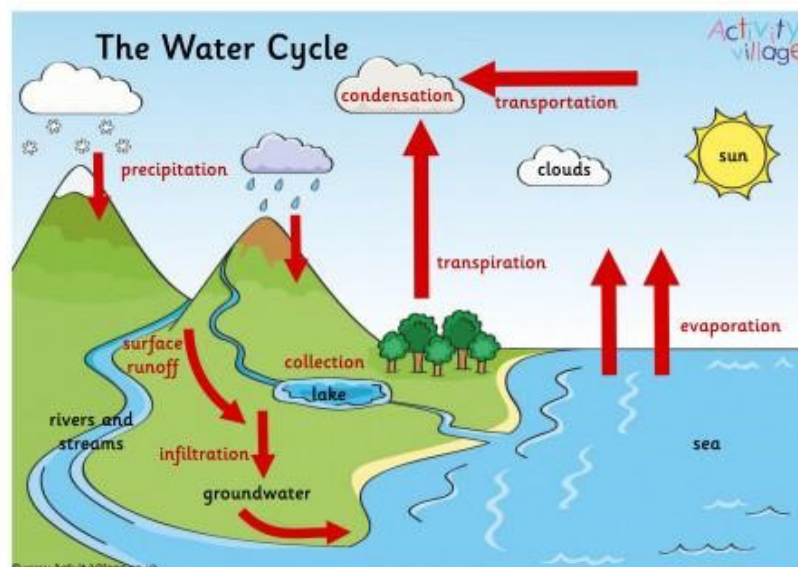
Volcanoes



Volcanoes are openings in the Earth's surface. **Active volcanoes** erupt often or have erupted recently. **Dormant volcanoes** have not erupted for a long time, but can still erupt. **Extinct volcanoes** can no longer erupt and have not erupted for thousands of years.

Homework Ideas:

1. Make a working model of an erupting Volcano (search for how to do this online).
2. Research the events that happened in 1910 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. Imagine that you are in Shackleton's ship, the Endurance. Write a newspaper report describing what happened and how people felt.
4. Research about the parts of a volcano. Draw it and label its features.
5. Draw and paint a picture of an iceberg.
6. Create a board game about exploring Antarctica.
7. Create a fact poster for a famous Antarctic Explorer.
8. Draw/paint a birds-eye-view picture of Antarctica.



The Water Cycle

Starting in the ocean, the heat of the Sun turns sea water into water vapour, tiny droplets of water which float in the air. This process is called evaporation. Water vapour rises into the sky to make clouds. The wind blows the clouds over land and they drop their water as rain, sleet or snow. This falls onto the land as water, which allows plants to grow and gives us drinking water. Much of the water then flows into lakes and rivers and is carried back to the sea. Then the process begins again.