

Geography

# Survival



**Atlantic Academy Portland**  
an Aspirations Academy



## Year 4 - Spring 2

Name: \_\_\_\_\_

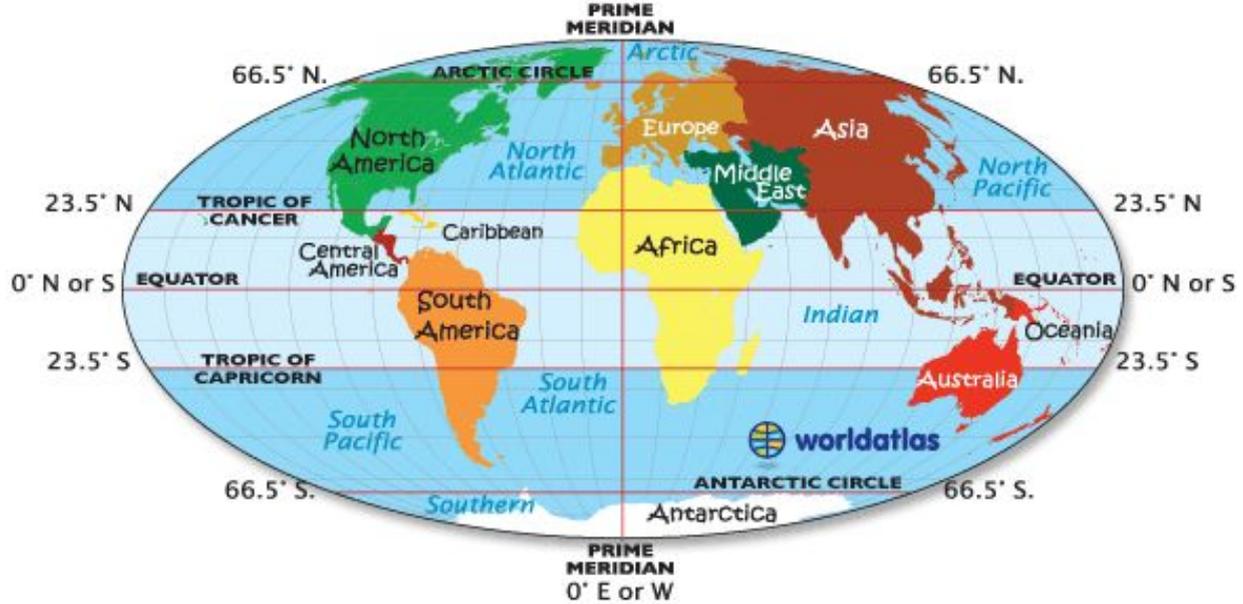
Class: \_\_\_\_\_

# Year 4 Geography Knowledge Organiser - Spring 2 - Survival

## Week 1 - The World

1	<b>Hemisphere</b>	Half of a sphere or ball. People use the word to describe half of the earth.
2	<b>Equator</b>	Imaginary line dividing the Northern and Southern Hemispheres.
3	<b>Tropics</b>	The only part of the earth where the sun shines directly downwards. Usually warmer than other parts
4	<b>Tropic of Cancer</b>	An imaginary line which marks the northern edge of the tropics.
5	<b>Tropic of Capricorn</b>	An imaginary line which marks the southern edge of the tropics.

## Week 2 - The World



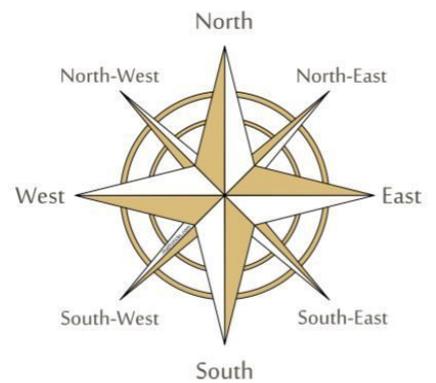
## Week 3 - Map Work

6. Campsite	7. Railway	8. School	9. Motorway	10. River	11. Church	12. Post Office	13. Woods
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## Week 4 - Key vocabulary

14	<b>Characteristics</b>	A feature or quality belonging to a person, place or thing.
15	<b>Survival</b>	Continuing to live or exist, typically in spite of an accident, ordeal or difficult circumstances.
16	<b>Arctic</b>	Area of frozen sea and land around the North Pole.
17	<b>Antarctica</b>	Area of frozen sea and land around the South Pole.

## 22. Compass Points



## Week 5 - Famous Explorers

18	<b>Christopher Columbus</b>	The first European to land on South American mainland.
19	<b>Ernest Shackleton</b>	A polar explorer, led British expeditions to the Antarctic.
20	<b>Neil Armstrong</b>	The first person to walk on the moon
21	<b>Robert Falcon Scott</b>	'Scott of the Antarctic' was a naval officer and explorer, who died attempting to be the first to reach the South Pole.

## Week 6 - Types of Climate

27	<b>Climate</b>	The average weather in a place over many years.
28	<b>Tropical</b>	Places found on or close to the Equator are typically tropical: they're warm and wet
29	<b>Arid</b>	Very dry climates, as you would find in a desert
30	<b>Mediterranean</b>	hot dry summers, and cooler wetter winters.
31	<b>Continental</b>	In areas far from the sea, the climate is continental - long, cold winters & short, hot summers
32	<b>Polar</b>	A polar climate is dry. Temperatures here are always very low.

# LESSON ONE: THE EARTH

Date: \_\_\_\_\_

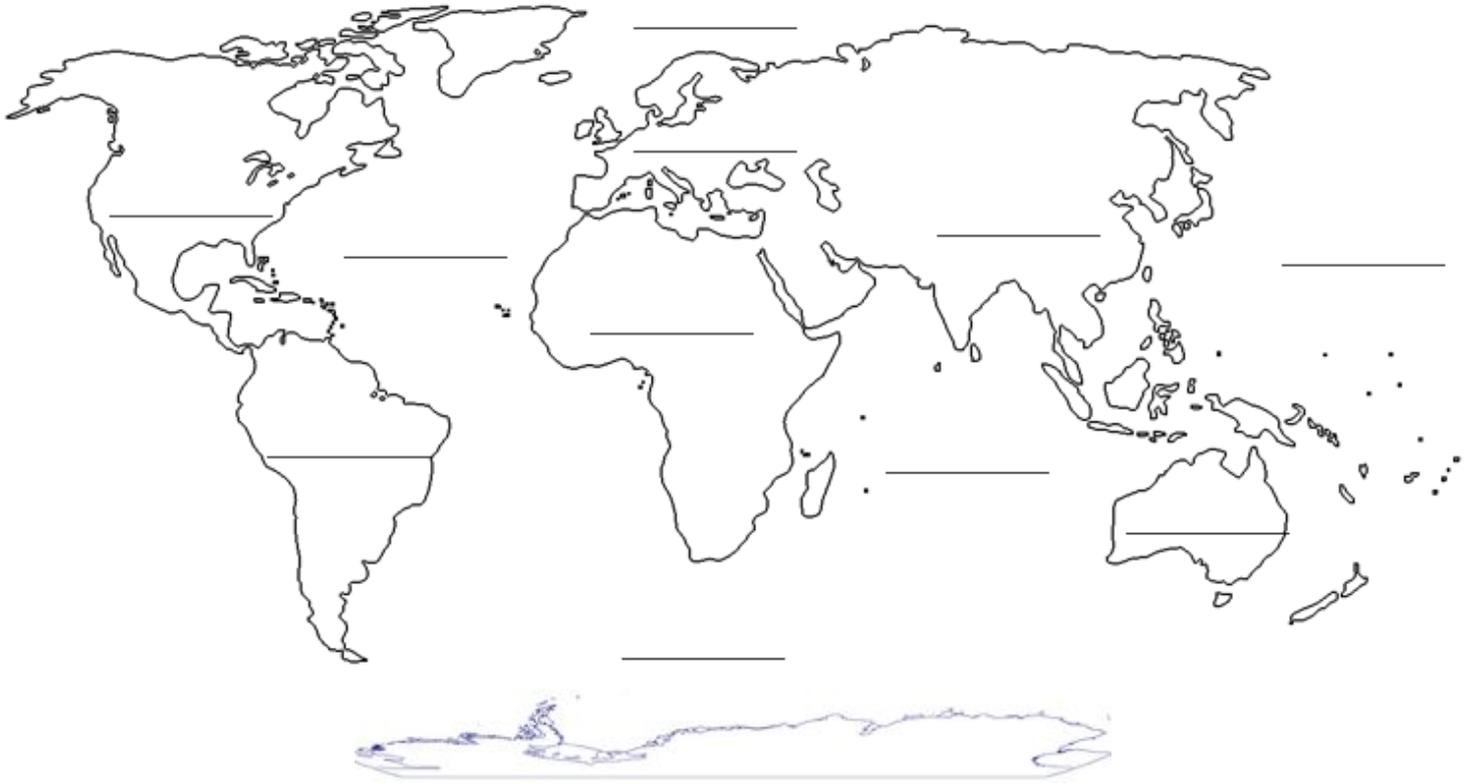
1. Look at the world map below. Label the continents and oceans.

Continents: Africa, Antarctica, Asia, Australasia/Oceania, Europe, North America, South America,

Oceans: Pacific, Atlantic, Indian, Arctic, Southern Ocean

## Key Terms:

Equator,  
Northern Hemisphere,  
Southern Hemisphere.

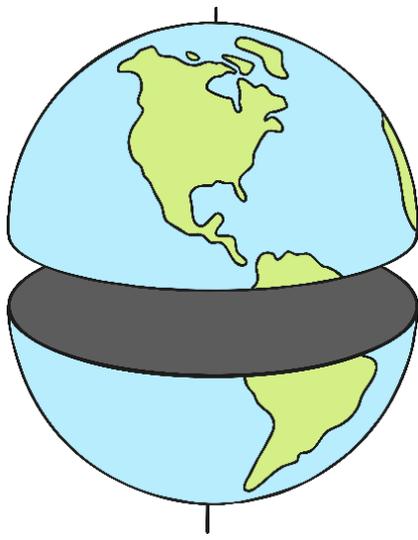


**Key Question: Do we live in the north or the south?**

## Everybody Reads

We live on a planet that's shaped like a **sphere**, or a ball. If you took a ball, like a basketball or a football, and drew a straight line right around the middle of the ball, like you were going east to west on the globe, you would have cut the ball, or sphere, in half. Each half is called a **hemisphere**, and the line you have drawn is called the **equator**.

The equator is an imaginary line that divides the earth into halves called the Northern and Southern Hemispheres. When we say that the equator is an imaginary line, we mean that there is no physical or real line cutting the earth in half. It is a line drawn on maps to show where the hemispheres are located. The Northern Hemisphere lies above or to the north of the equator, while the Southern Hemisphere lies to the south or below the equator.



**2. How would you describe the UK's position on the Earth?**

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**Everybody Reads**

The Equator, or line of 0 degrees latitude, divides the Earth into the Northern and Southern hemispheres. The Northern Hemisphere contains North America, the northern part of South America, Europe, the northern two-thirds of Africa, and most of Asia. The Southern Hemisphere contains most of South America, one-third of Africa, Australia, Antarctica, and some Asian islands.

There are differences in the climates of the Northern and Southern hemispheres because of the Earth's seasonal tilt toward and away from the sun. In the Northern Hemisphere, the warmer summer months are from June through September. In the Southern Hemisphere, summer begins in December and ends in March.

**3. Describe the climates in the Northern hemisphere**

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**4. Describe the climates in the Southern Hemisphere.**

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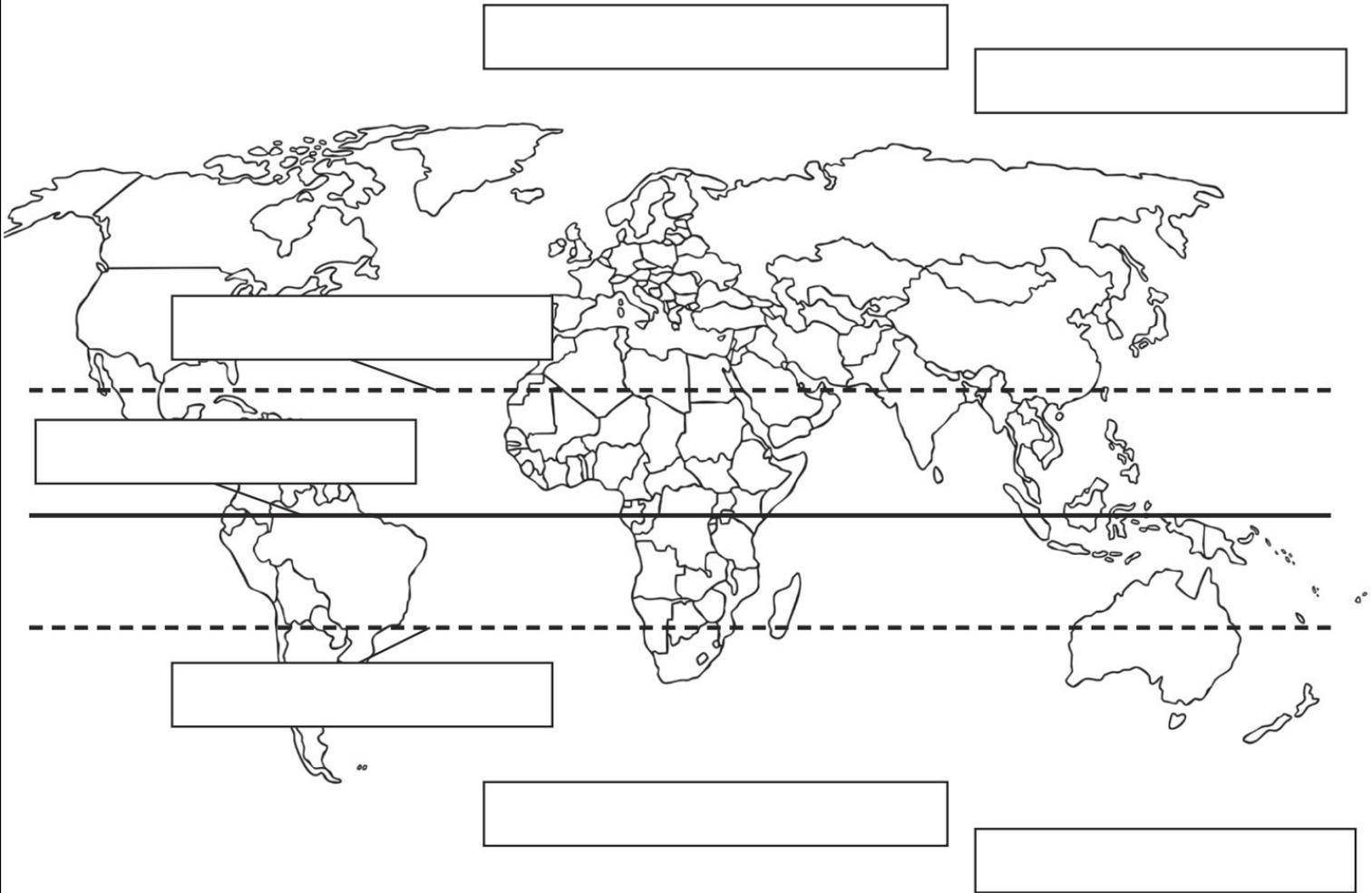
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## Everybody Reads

The weather changes in different parts of the world. Where there are similar weather patterns this is known as a climate. At the top of the Earth there is an arctic climate and some of the coldest temperatures in the world are found here. Temperate climates are found a bit further south, and as you approach the equator you find Mediterranean and desert climates. Some of the hottest places on Earth are found here, and few people live in this climate. At the equator there is a tropical climate, and travelling south of the equator it gets cooler again before reaching the Antarctic.

### 5. Label the following on the world map below:

Equator, tropic of cancer, tropic of capricorn, northern hemisphere, southern hemisphere, north pole, south pole.



### Countries on the Equator

Of the 13 countries that lie on the equator, seven are in Africa—the most of any continent—while South America is home to three of the nations (Ecuador, Colombia, and Brazil). The remaining three (Maldives, Kiribati, and Indonesia) are island nations in the Indian and Pacific oceans.





# LESSON TWO: LINES OF LATITUDE AND LONGITUDE

Date: \_\_\_\_\_

**Key Terms:**  
Latitude, longitude,  
co-ordinates.

**Recap: 1. Look at the map below:**

a. Give the name of the red line?

b. What is the half above it called?

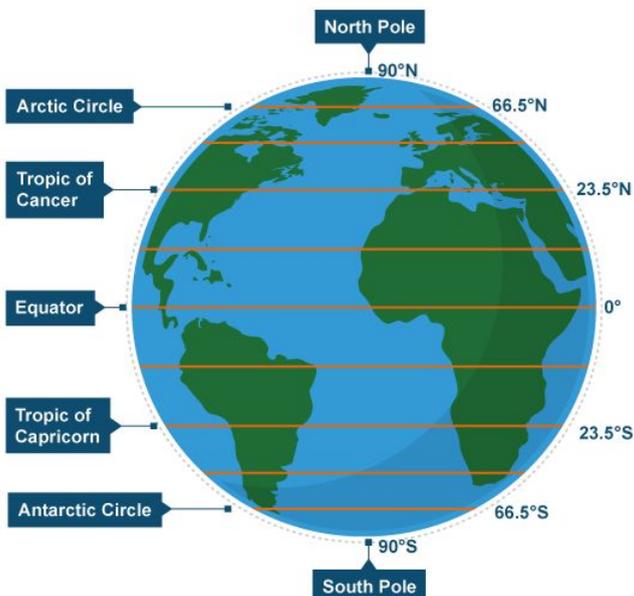
c. What is the part below the red line?



**Key Question: How can we locate countries around the globe?**

## Everybody Reads

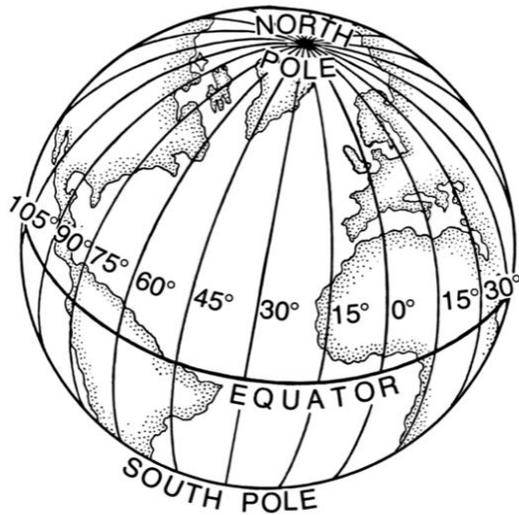
Lines of **latitude** and **longitude** are used to locate places accurately on the Earth's surface.



Lines of **latitude** (also known as **parallels**) circle the Earth from east to west. These invisible lines are all the same distance apart. One line to the next is known as 1 degree. Each degree of latitude is separated into smaller divisions called minutes.

**LA**titude - Lines Around the Earth!

**Figure 1** illustrates important lines of latitude



Lines of **longitude** run from the top of the Earth to the bottom. They are not parallel as lines of latitude are - they meet at a point at the north and south poles and are called meridians.

They divide the Earth into segments, like an orange.

The line which runs through Greenwich in London is called the Greenwich Meridian or Prime Meridian. The Prime Meridian is  $0^\circ$  longitude.

## 2. Explain what lines of latitude are.

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## 3. Explain what lines of longitude are.

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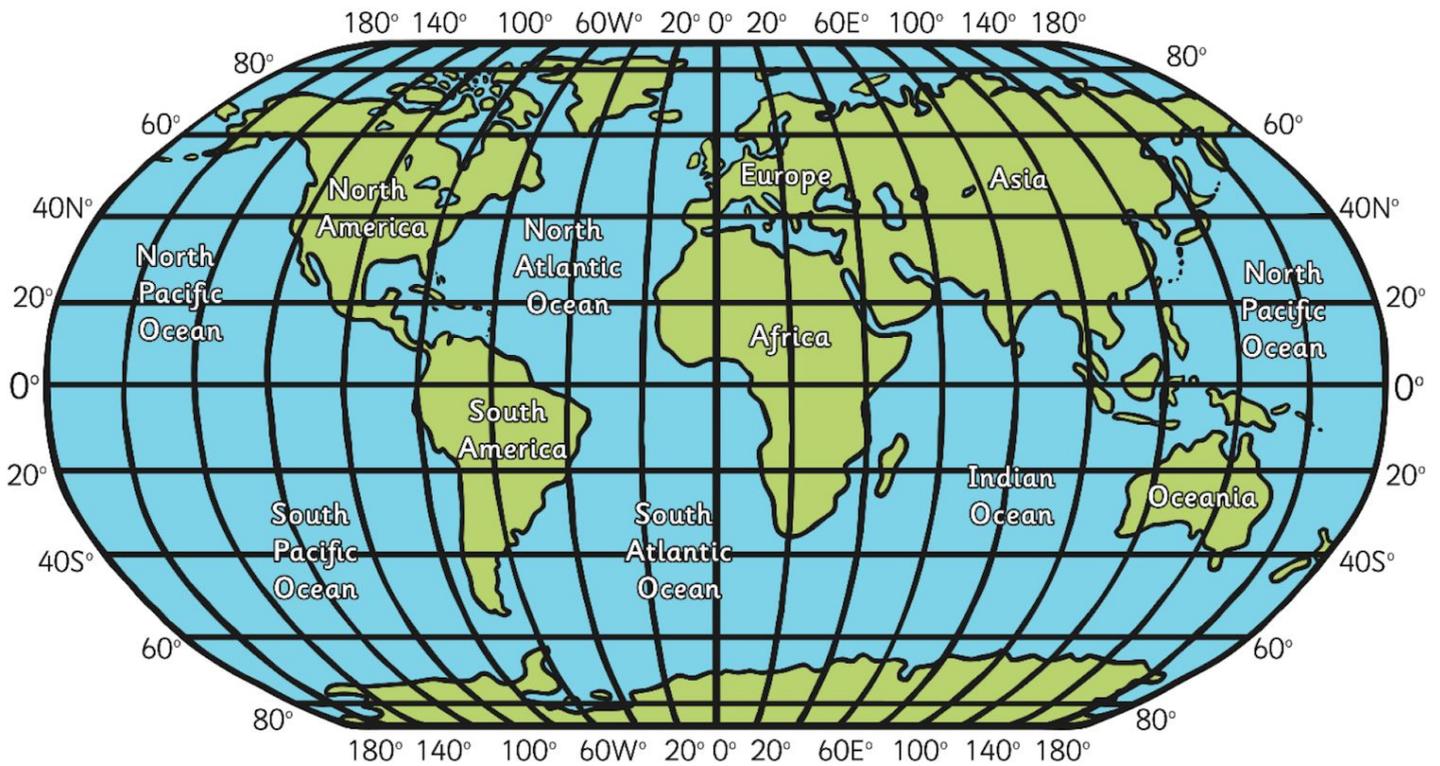
### Everybody Reads

As we have already read, the lines extending around the Earth horizontally are called lines of latitude. They measure how far north or south an object is on the Earth. The lines running vertically around the Earth are called longitude. These lines are called meridians, and measure how far east or west an object is.

As with latitude, longitude is measured as an angular distance. With latitude, the angular distance is measured from the equator. This is a natural place to begin. However, with longitude there is no natural beginning point. One of these lines must be designated as a prime meridian, or as the  $0^\circ$  mark, but which one? For many years, each country had its own prime meridian. France used a meridian passing through Paris, while England used a meridian passing through Greenwich, England. Either one worked just as well, as long as you were only communicating with people from the same country. But what happens as technologies improve, and travelers begin interacting with people from many different lands? If each country is using a different prime meridian to mark  $0^\circ$  longitude, then it would be impossible to give someone from another country a location, and have them be able to accurately find it.

Over time, more and more travelers began to recognise the meridian passing through Greenwich, England, as the Prime Meridian. In 1884, a group of scientists, navigators, and businessmen made Greenwich, England, the official worldwide Prime Meridian.

The further away from the Prime Meridian that one travels the higher their longitude becomes, until they reach 180 ° longitude. If an individual is in the Eastern Hemisphere, their longitude is measured in degrees east. If they are in the Western Hemisphere, their longitude is measured in degrees west.



We use numbers and letters to create a coordinate. Within the co-ordinate, the ° stands for degrees and the ' stands for minutes. The letters relate to north, south, east or west and are shown as capitals. The latitude is always given first. To locate Florida, USA using this principle we would say it has the following coordinates: 28°00'N 82°00'W.

**4. Explain why lines of Latitude and lines of longitude are important.**

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## LESSON THREE: CONDITIONS IN THE ARCTIC

Date: \_\_\_\_\_

### Key Terms:

Climate

Equator

Poles

### Review: 1. Complete the following questions.

a. What is the word used to describe half of the earth?

\_\_\_\_\_

b. What is the name of the imaginary line dividing the north and south hemispheres?

\_\_\_\_\_

c. Explain what a line of latitude is

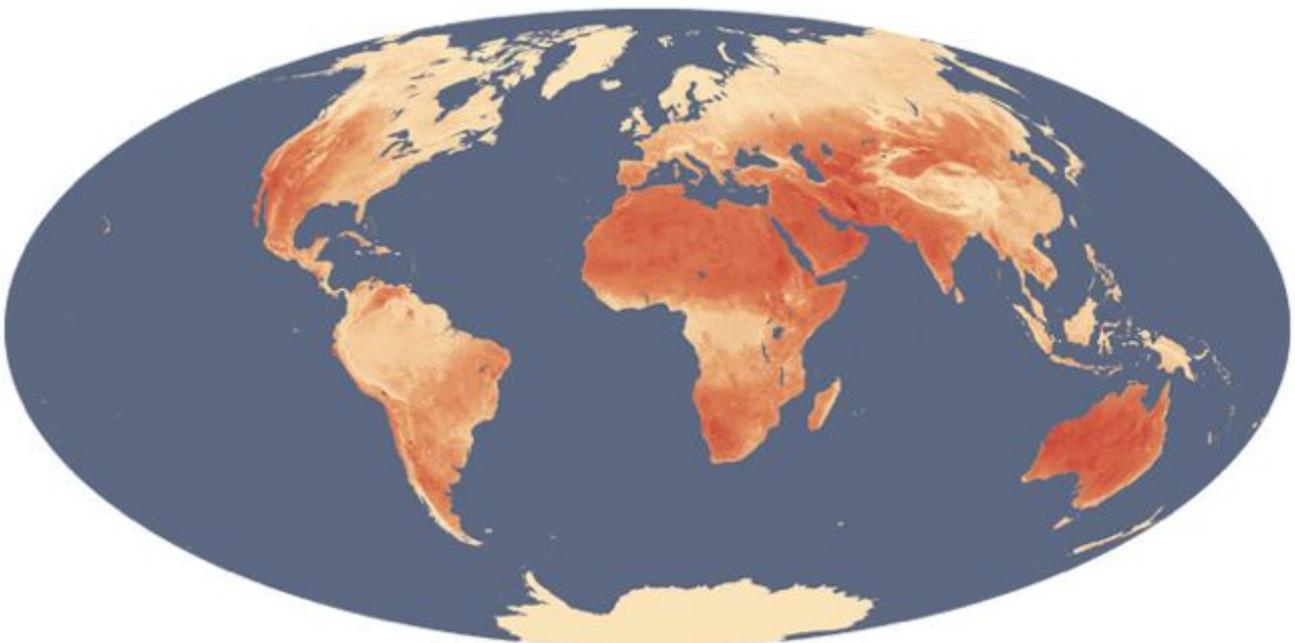
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d. Explain what a line of longitude is.

\_\_\_\_\_

### Key Question: How Would you survive in the Arctic?

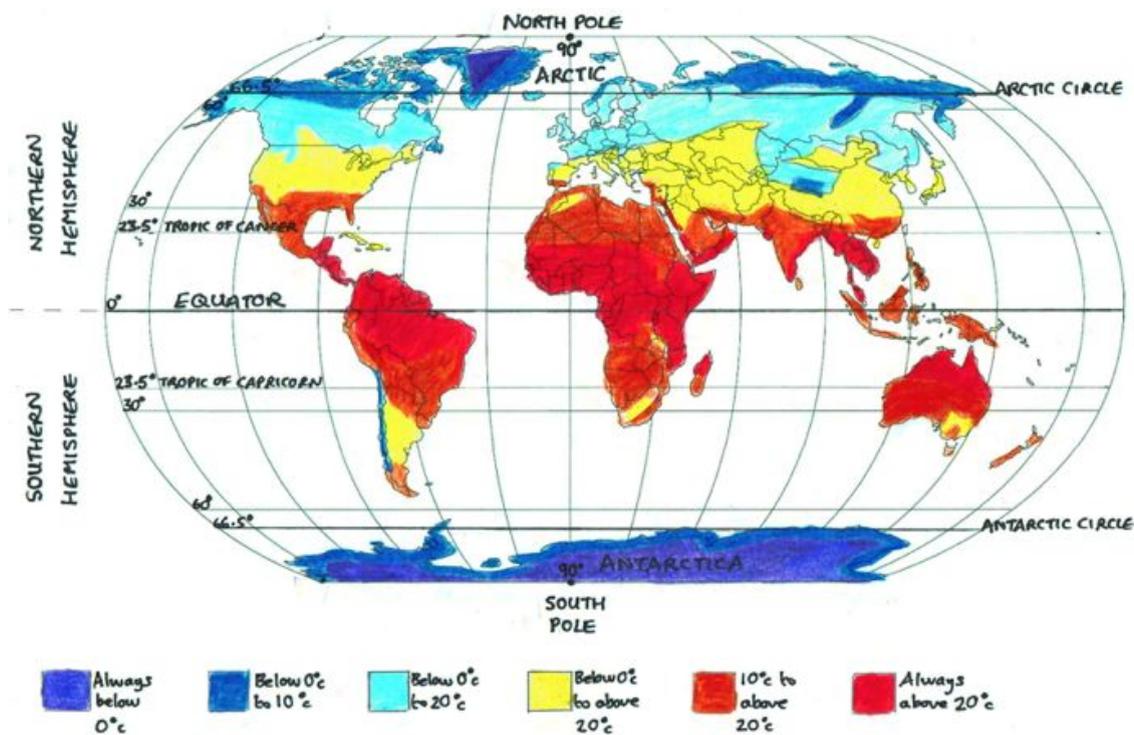
2. Using the illustration below, label the hot and cold regions of the earth



## Everybody Reads

The North Pole is the most northern point of the Earth and the South Pole is the most southern point.

Temperatures are very low at both.



3. State what you notice about the locations of the hot and cold countries?

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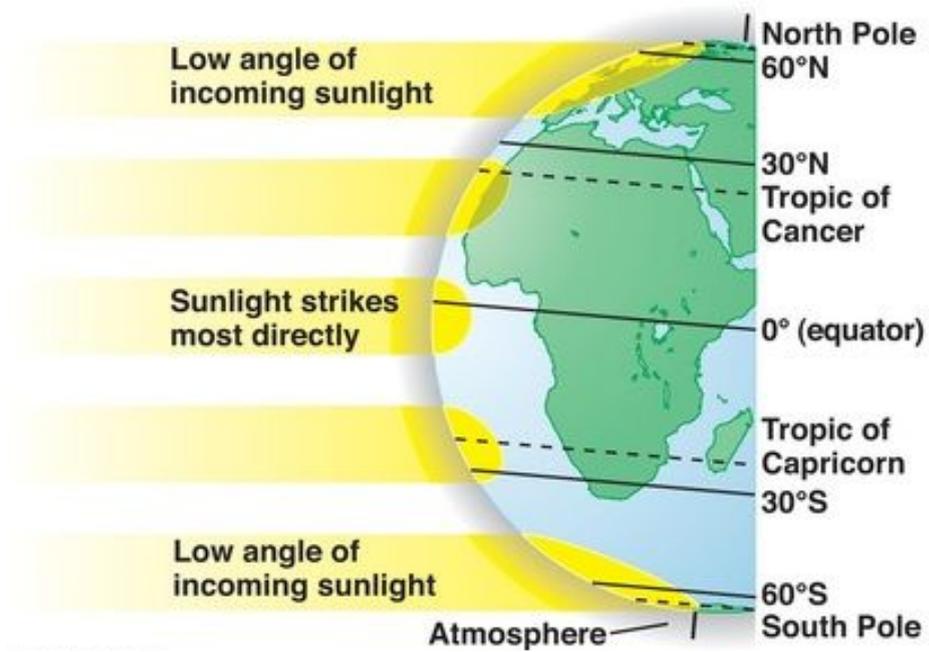
4. Identify the continents that the Equator runs through.

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## Everybody Reads

At the Equator, the sun stays almost directly overhead everyday. This means the sun's rays come in at a steep angle so they are concentrated over that area and temperatures are always high. At the Poles, the sun's rays strike the Earth at a very low angle, so they are spread out over a greater area and temperatures are icy cold. Also, ice makes these regions even colder by reflecting the sun's light and heat back into space.



5. Explain why the weather is hotter at the equator.

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6. Do we live nearer the Equator or the Poles? What is our climate like?

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**Everybody Reads**

The Arctic is located at the northernmost point of our planet - the area between the Arctic Circle and the North Pole. The Arctic is a sea of ice, surrounded by cold, treeless lands called tundra.



**7. Which Countries are in the Arctic Circle?**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**Everybody Reads**

During the winter, the Arctic Ocean is almost entirely covered in drifting sea ice. In the summer, around 50% of the Arctic Ocean remains frozen.

The North Pole is in the Arctic Ocean, unlike the South Pole, which is on land. However, the sea around the North Pole is permanently frozen and covered in snow, which makes it look like land.

In the Arctic, there is at least one 24 hour period every summer during which the sun doesn't set - known as 'Midnight Sun'. There is also at least one 24 period in the winter during which the sun doesn't rise - the

'Polar Night'. The further north you go, the longer the periods are during which the sun either doesn't rise or doesn't set.

The Arctic climate is characterised by long, cold winters and short, cool summers. Temperatures only rise above freezing for between two and four months of the year. The warmest month in the Arctic is July but even then, the average daily temperature doesn't exceed 10°C. The average temperature in the winter can drop below -50 °C across large areas of the Arctic.

**8. Describe the conditions in the Arctic. What would it be like to live there?**

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**Everybody Reads**

Antarctica is a continent but it contains no countries. It is not owned by any one country. The global community have agreed it should be an area of peace and science. The environment is protected, with mining and military activities banned.

Around 3500 people stay here every year as part of the scientific and environmental research teams. No-one lives there permanently.

# LESSON FOUR: FAMOUS EXPLORERS

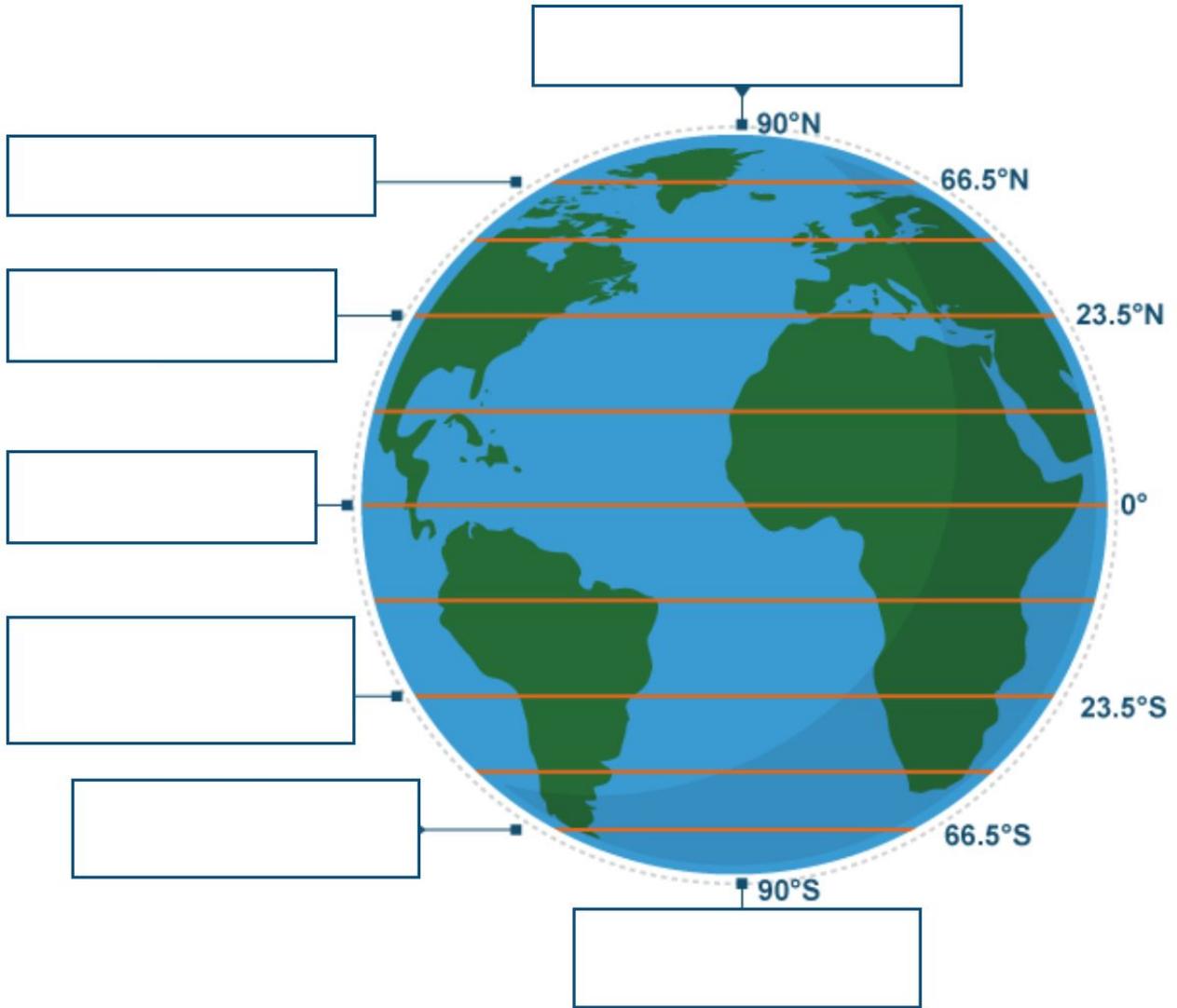
Date: \_\_\_\_\_

**Key Terms:**  
Explorer, Territories,  
Expedition

## Review

1. Complete the illustration below with the following terms:

Tropic of Cancer, Tropic of Capricorn, Equator, Antarctic Circle, South Pole, North Pole, Arctic Circle



**Key Question: Who was the first to reach Antarctica?**

## Everybody Reads

Early explorers skimmed the boundaries of Antarctica in daring sea voyages to the ends of the Earth. In the early 20th century, a new generation plunged into the unknown. With only dogs, ponies, and human willpower, the intrepid pioneers of this Heroic Age forged virgin trails to the Pole and beyond.

## The race to the South Pole, 1911

In the early 20th century, the race was on to reach the South Pole, with a number of explorers setting out to claim it for their own. In 1911, Britain's Robert Falcon Scott and Norway's Roald Amundsen went head to head to reach the Pole, and it was to prove a dramatic journey for both of them – ending in victory for Amundsen and tragedy for Scott.

### 2. Explain why Explorers in 1911 wanted to explore new territories, in particular the Poles.



#### Everybody Reads

##### Scott's expedition

Robert Falcon Scott had attempted to reach the South Pole once before in 1902 but his party was forced to turn back due to ill health and sub-zero conditions. It was always Scott's intention to return and, with the support of the government, he secured funding.

Scott led a party of five which reached the South Pole on 17 January 1912, less than five weeks after Amundsen's Norwegian expedition. 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 died. When Scott and his party's bodies were discovered, they had the first ever discovered Antarctic fossils in their possession. The fossils proved that Antarctica was once forested and joined to other continents.



### **Amundsen's expedition**

Roald Amundsen was a respected Norwegian explorer who was determined to beat the Brits to the South Pole. He kept his plans to head south secret and set out with his crew on the *Fram*, appearing to head north round South America to the Arctic, but all the time intending to head south to Antarctica first and then continue north.

A team of five, departed base camp on 19 October 1911. They took four sledges and 52 dogs. Using a route along the previously unknown Axel Heiberg Glacier, they arrived at the edge of the Polar Plateau on 21 November after a four-day climb. The team and 16 dogs arrived at the Pole on 14 December 1911, 33–34 days before Scott's group. They left a small tent and letter stating their accomplishment, in case they did not return safely to Framheim.

### **3. Explain why Amundsen hid his plans and pretended to head north during his expedition?**

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### **The race**

On 18 October 1911, after the Antarctic winter, Amundsen's team set out toward the Pole. Captain Scott began his trek three weeks later. At around 15:00 on 14 December 1911, Amundsen raised the flag of Norway at the South Pole. He had reached the Pole a full 33 days before Captain Scott arrived. Amundsen and his crew returned to their base camp on 25 January 1912, 99 days and roughly 1400 nautical miles after their departure.

Scott left his base camp with his team to the Pole on 1 November 1911. He finally reached the South Pole on 17 January 1912, disappointed to learn that Amundsen had beaten him to it. The tortuous return journey was faced with pain, hardship and dignity. Weak from exhaustion, hunger and extreme cold, his last diary entry is dated 29 March 1912. He died in his tent alongside two of his men.



# LESSON FIVE: CLIMATE CHANGE

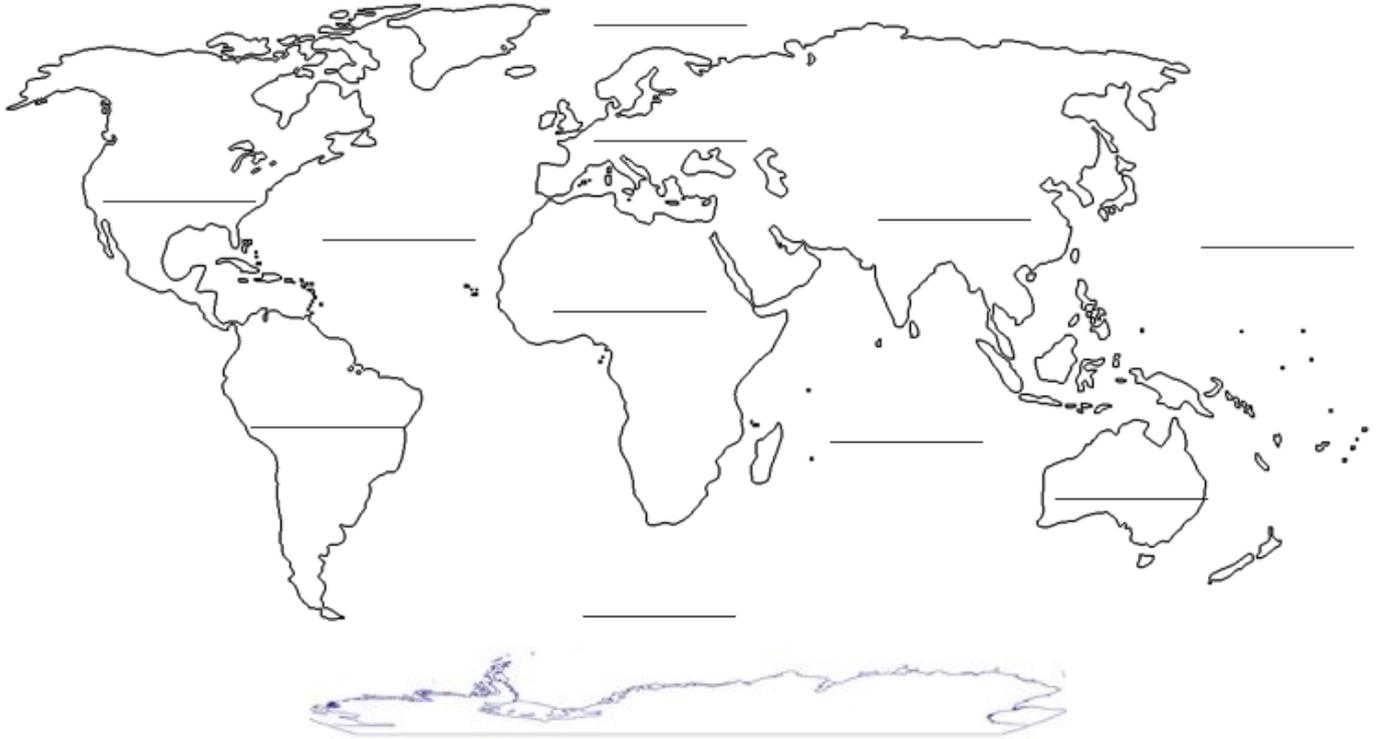
Date: \_\_\_\_\_

**Key Terms:**  
Climate  
Atmosphere  
Inuit  
Indigenous

**1. Look at the world map below. Label the continents and oceans.**

Continents: Africa, Antarctica, Asia, Australasia/Oceania, Europe, North America, South America,

Oceans: Pacific, Atlantic, Indian, Arctic, Southern Ocean



**Key Question: How is climate change affecting the Arctic?**

## Everybody Reads

Over 20,000 years ago, most of the world was covered in ice. Now, these huge sheets of ice are found only in the Antarctic and Arctic. They are called the polar regions.



Even though it is so cold, over four million people live in the Arctic! Many of these are Inuit people; they are indigenous to the Arctic. Indigenous means originating or occurring naturally in a particular place. You may also describe an indigenous person as native. People living in Arctic regions have adapted to live in these cold conditions.

**2. What do Inuit people do to ensure they can live in these extreme conditions?**

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**3. A large number of animals live in the polar regions. Name all those you see below:**



A.



B.



C.



D.



E.



F.



G.



H.



I.

## Everybody Reads

'Climate' is the type of weather a place has; the temperature, the amount of rainfall and the amount of sunlight. The polar regions have very cold weather all year round and there is lots and lots of ice! They have long periods of time where they are in complete sunlight or complete darkness.

**4. What is the weather like today in Portland?**

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**5. What is the climate in Portland?**

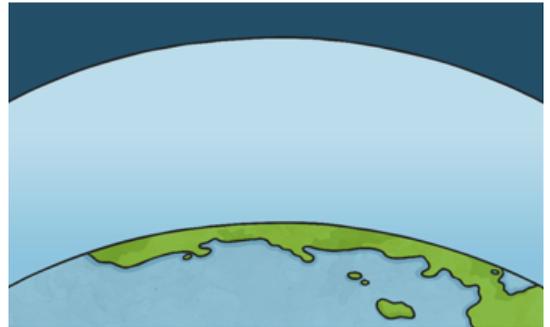
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## Everybody Reads

Planet Earth is surrounded by a layer we call the atmosphere, which contains a layer of gas. This gas enables the Sun's rays to get through and heat up the earth.

This gas is incredibly important, as it also allows some of the heat from the Sun, to go back into space, so that Earth does not get too hot, and we are not damaged by the strong rays from the Sun.

It acts like a protective blanket! But unfortunately, our protective blanket is being damaged causing something called climate change.



**6. Explain the role of the atmosphere on the earth.**

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Greenhouse gases are substances such as methane, carbon dioxide and water vapour. These gases stop heat from getting back from the Earth's atmosphere into space. Meaning Earth is slowly getting warmer.

**What Is Causing These Greenhouse Gases?**

Greenhouse Gas	Natural Cause	Man-made Cause
Methane	Plants decomposing	Cows, coal, mines, some types of rice fields
Water vapour	Evaporating water within lakes, oceans and rivers	Burning of hydrocarbon fuels
Carbon dioxide	Respiration of plants and animals; volcanoes and forest fires	Cement-making, burning fossil fuels and cutting down trees (deforestation)

**7. Describe some simple steps we, as global citizens, could make to reduce the amount of greenhouse gases in the atmosphere.**

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Due to climate change, the polar ice caps are melting as the regions become warmer.



Animals in these areas have adapted to live in the cold weather and they rely on the ice cover and having cold and warm seasons to survive.

For example, the polar bear is most active during winter and spring because this is when there is the most ice. But because the weather is warmer, the cold season is now shorter. If the warm season lasts longer, the polar bears have to survive for longer without food. Lots of polar bears have lost weight and there are now less polar bear cubs to carry on the species. There are approximately only 20,000 polar bears left in the world.



Many indigenous people rely on local wildlife, like fish and reindeer, as the main part of their diets. As the number of animals decreases, the amount of available food also goes down.

The melting ice is also causing sea levels to rise, which in turn causes flooding.



# LESSON SIX: SURVIVAL

Date: \_\_\_\_\_

## Recap:

1. What is the name of the frozen sea of land around the North Pole?

2. What is the name of the frozen sea of land around the south pole?

3. Who won the race to the South Pole?

4. Explain climate.

**Key Terms:**  
Equator,  
Northern Hemisphere,  
Southern Hemisphere,  
Latitude, longitude,  
co-ordinates,  
Climate  
Equator  
Poles  
Explorer,  
Territories,  
Expedition  
Climate  
Atmosphere  
Inuit  
Indigenous

## Key Question: Describe life in Arctic.

Paragraph 1: Introduce the makeup of the earth

- Sphere
- Northern hemisphere, southern hemisphere

Paragraph 2. Lines of Latitude and Longitude

- What is their purpose
- Why are they important
- How are they used.

Paragraph 3. Life in the poles

- What is the climate like
- What is it like to live and survive there

Paragraph 4. Famous explorers

- Why were people drawn to exploring the arctic
- The race to the antarctic Scott Vs Amundsen

Paragraph 5 Global Warming

- Introduce the term global warming
- How will this affect like in the Polar regions
- What can we do to stop it.

Paragraph 6 Conclusions

- Why should we look after the Arctic and Arctic.
- Global responsibilities.

