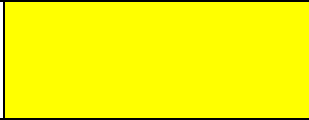


Subject: Geography	Year Group: 6	Unit: The Exploration of Antarctica
Key Question: Where is Antarctica? What type of environment is it? What was the route taken by Shackleton on his last expedition to the South Pole?		
First- hand experience:		

NC Objectives to be addressed:	Prior Learning required:		
<p><u>Locational knowledge:</u></p> <ul style="list-style-type: none"> -locate the world's countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities -identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night) <p><u>Human and physical geography:</u></p> <ul style="list-style-type: none"> -describe and understand key aspects of: <ul style="list-style-type: none"> -physical geography, including: climate zones, biomes and vegetation belts -human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water <p><u>Geographical skills and fieldwork:</u></p> <ul style="list-style-type: none"> -use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied -use the 8 points of a compass, 4- and 6-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world 	<p>Climate zones in previous year groups when studying different parts of the world.</p> <p>Year 4 Term 2 Lights and Lenses – Location of Southern Lights.</p> <ul style="list-style-type: none"> • identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night) 		
Local	Regional	National	International



Key Vocabulary:

Migrate	To move from one region to another.	Latitude	A geographical coordinate system associate with positons on earth. Horizontal Lines used to describe location
Overseas	In a foreign country across the sea.	Equator	An invisible line that goes around the centre of the Earth dividing it up into the Northern and Southern Hemisphere.
Time zones	Prime / Greenwich/ Meridian	Southern Hemisphere	Everything South of the Equator The most Southern point is the <i>South Pole</i>
Longitude	A geographical coordinate system associate with positons on earth. Vertical Lines used to describe location	Northern Hemisphere	Everything North of the Equator The most Northern point is the <i>North Pole</i>
Tropics of Cancer	The most northern latitude on Earth where the sun can appear directly overhead.	Antarctic Circle	An invisible line around the Southern Hemisphere (bottom section) of the Earth. Everything South of this line is a part of the Antarctic Circle
Tropics of Capricorn	The most southern latitude on Earth where the sun can appear directly overhead.	Climate	Polar, Temperate, Tropical, Mediterranean, Desert, Mountainous
Biomes	rainforest, desert, savannah, woodland, grassland, tundra	Vegetation	Plants found in a particular area or habitat.
Physical features	A physical feature is a <i>Natural</i> characteristic of a place. Examples: <i>iceberg, ice shelf, pancake ice, ice floe, ice ball, Crevasse</i>	Tundra	A vast, flat, treeless region
Adapt	To modify, change or adjust to new conditions.	Exploration	Exploring and examining an unfamiliar place.
Tourist	People visiting and exploring new places.		
Ecosystem	A biological community of organisms and their physical environment.	Prime Meridian	There is an imaginary line running through the UK called the Prime Meridian . It runs through a place in London called Greenwich .

-The Prime Meridian splits the world into eastern and western **hemispheres** .

Sequence of learning:

Knowledge to be taught (sequential)

1.

- Four of the most significant imaginary lines running across the surface of Earth are the Equator, the Tropic of Cancer, the Tropic of Capricorn, and the Prime Meridian.
- Lines of longitude and latitude allow you to quickly and accurately locate places and features on the earth's surface and play an important role in determining times and dates. They are imaginary lines.
- Longitude: Lines of longitude run vertically around the earth and are not parallel as they meet at the poles and are at their widest at the equator.
- Latitude: Lines of latitude are imaginary lines that run in an east-west (side-to-side) direction around the earth.
- Time zones** are divided by imaginary lines called **meridians** which run from the North Pole to the South Pole.
- There is an imaginary line running through the UK called the **Prime Meridian** . It runs through a place in London called **Greenwich** .
- The Prime Meridian splits the world into eastern and western **hemispheres** .
- Time in countries to the east of the Prime Meridian is always in front of that in the UK.
- Time in countries to the west of the Prime Meridian is always behind that of the UK.

2.

(Recapped knowledge)

- A *climate zone* is an area whose temperature and rainfall are determined by its position in the world.
- The main climate zones are Polar, Temperate, Tropical, Mediterranean, Desert, Mountainous
- A Biome is a way of describing the ecosystem of plants and animals in an area. It is influenced by its climate.
- The main biomes are Tropical rainforests, Deserts, The Savannah, Woodlands, Grasslands, The Tundra
- The animals in a biome depend upon plants for food. The plants in a biome often also depend upon the animals for spreading pollen and seeds so that new plants can grow. Both plants and animals rely on each other to stay alive.

Procedural knowledge to be taught:

Review and Consolidate:

- Using maps and atlases to locate areas in the world

New Learning:

- use maps to identify lines of longitude and latitude
- use lines of longitude and latitude on maps and atlases to locate areas in the world
- use lines of longitude and latitude to identify hemispheres and time zones
- using maps and photographs describe key features of climate zones and biomes
- explain how biomes affect human and physical features of a place
- using maps and photographs describe key features of the polar regions
- describe how the climate and vegetation impact on life in the polar regions

3.

- the north and south poles are so cold due to their proximity to the sun
- the sun's rays have to travel further and have weakened by the time they reach the Poles
- physical features that can be found at the Poles are icebergs, ice shelves, pancake ice and ice floes
- ice balls can be formed by rolling waves and wind

4.

Antarctica:

<https://vimeo.com/11948026>

- Antarctica is the southernmost continent on Earth and is the coldest place on Earth.
- The South Pole is located in Antarctica.
- Antarctica is surrounded by the Southern Ocean.
- Most of Antarctica is covered in ice over 1.6 kilometres thick (1 mile).
- Because it experiences such little rain, Antarctica is considered a desert.
- While humans don't permanently reside in Antarctica, several thousand people live and work at various research facilities found on the continent.
- Around 90% of the ice on Earth is found in Antarctica.
- temperatures range from -28°C to -60°C

5.

- Antarctica is a Polar climate zone with a Tundra biome
- While Antarctica features harsh living conditions, a number of plants and animals have adapted to survive and call the icy continent home.
- Typical Tundra plants are small scrubs, grasses and mosses.
- No land animals are able to live on Antarctica. Penguins and seals survive because they are predominantly sea creatures that have adapted to the cold.

6.

- About **40,000 tourists from around the world** visit Antarctica every year on polar cruises and exploration trips.
- Tourist attractions in Antarctica are:
 - Deception island, formerly a whaling station, is popular for its still active volcano and its viewpoint at Neptune's Bellows.
 - Port Lockroy on Wince Island, where there is an Antarctic heritage centre and museum.

Drake Passage is a popular part of polar cruises although it is known for its rough seas. The water channel lies between South America and Antarctica.

-Tourists will also enjoy watching the *Aurora Australis*, the Southern Lights in the Antarctic winter between March and September.

7.

- (to be taught alongside the History knowledge and route mapped on a map of Antarctica)

-Shackleton's journey took him from London to Antarctica via Buenos Aires, Argentina and the South Georgia Island. Their boat became trapped in the ice and the men had to live off the ice until the ice thawed and they were able to sail to Elephant Island where they took a lifeboat to South Georgia Island.

Place Knowledge

Locational Knowledge

Human and Physical

Skills and Fieldwork

Information for teachers:

[UKS2 Climate Change Affects Penguin Daily News Resource Pack \(twinkl.co.uk\)](https://www.twinkl.co.uk/resource/ks2-climate-change-affects-penguin-daily-news-resource-pack)

[Antarctic Explorers: Finding the South Pole PowerPoint and Activity Pack \(twinkl.co.uk\)](https://www.twinkl.co.uk/resource/antarctic-explorers-finding-the-south-pole-powerpoint-and-activity-pack)

[Ernest Shackleton PowerPoint - antarctic travelers explorers \(twinkl.co.uk\)](https://www.twinkl.co.uk/resource/ernest-shackleton-powerpoint-antarctic-travelers-explorers)

[Climate Around the World Examples PowerPoint \(teacher made\) \(twinkl.co.uk\)](https://www.twinkl.co.uk/resource/climate-around-the-world-examples-powerpoint-teacher-made)

[Climate Around the World Zones Map \(teacher made\) \(twinkl.co.uk\)](https://www.twinkl.co.uk/resource/climate-around-the-world-zones-map-teacher-made)

