

Unit Title: Why is it difficult for life to survive in the Polar Regions?

Y3
Autumn 2

End Point - The aim of this unit is for pupils to:

- know the impact of climate change and human activity on the world's polar regions
- understand the environment in the Arctic and Antarctic Circles
- name and locate the equator, north and southern hemispheres, tropic of Cancer and Capricorn, Arctic and Antarctic circles
- To understand the difference between weather and climate

End of unit assessment task:

Create an information booklet, answering the unit question (ensure focus on the hostility of the environment and impact of climate change on animals, who live in these regions).

Links:

Text - 'The Ice Bear' – Jackie Morris

Text - 'The Ice Palace' – Robert Swindells

Prior Learning:

- Seasonal weather patterns (Y1)
- Equator, North and South Poles, World's seven continents: Europe, North America, South America, Africa, Asia, Oceania and Antarctica. (Y2)
- The world's five oceans: Atlantic Ocean, Pacific Ocean, Indian Ocean, Southern Ocean and Arctic Ocean (Y2)
- Know that different parts of the world have different climates (previous topics on Captain Cook and the Kenyan Savannah in KS1)





Key Aspects of the Unit:



Map and atlas work/Fieldwork and investigation



Location

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|  | Physical Features: Understand that physical features are natural features in an environment. Understand that physical features can include: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather and volcanoes. |
|  | Human Features: Understand that human features are features in an environment that have been made by people. Understand that human features can include: city, town, village, factory, farm, house, office, port, harbour and shop. |
|  | Physical Processes Impact of nature on the earth e.g. erosion, plate tectonics, water cycle. |
|  | Human Processes: Understand the processes that humans have developed across the globe including travel trade and economics. |

Key Knowledge:

- Know about the Arctic (tundra) biome.
- For children to be able to answer the following questions on the Arctic (tundra) Biome:

- What is the biome like?
 - Where is this biome found?
 - What is its climate?
 - Which animals live there?
 - Which plants live there?

The tundra is the coldest biome in the world, is very dry, and has only two seasons. The winters are very long and dark, which makes it difficult for plant to survive. Animals that live in the tundra include polar bears and seals.

- Know the location of the equator, Tropics of Cancer and Capricorn
- Know the location north and southern hemispheres
- Know the significance of the equator on climate
- Understand the term 'climate'
- Know what climate zones are
- Know the location of the Arctic and Antarctic Circle
- Know that the Arctic Circle is located in the Northern hemisphere and Antarctica is located in the Southern hemisphere.
- Know that the Arctic Circle is a frozen ocean surrounded by land
- Know that Antarctica is a frozen continent surrounded by ocean
- Know, name and locate the countries within the Arctic Circle
- Know the key reasons that make the Polar regions hostile for human habitation

- To begin to understand the impact of climate change on polar regions
- Know that humans are causing global warming
- Know the effect of climate change on animal life in the Arctic Circle (focus on Polar Bears linked to POR text – The Ice Bear)
- To make comparisons between the climate and land use in the Polar regions and in the UK

Geographical Skills:

Mapping:

- Locate a broader range of places on large scale maps
- Experience a wider range of maps of different scales
- Begin to use atlases to find out about other features of places (e.g. the hottest part of the world)

Fieldwork:

- Understand the four compass points and begin to use them to follow routes

Vocabulary

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|---------------------|--|
| Climate | The general weather conditions that are typical |
| Biome | A natural area of vegetation and animals |
| Tundra | A large, barren region with no trees. |
| Weather | The condition of the atmosphere at a particular place and time, such as the temperature, and if there is wind, rain, sun, etc. |
| Equator | An imaginary line around the middle of the Earth at an equal distance from the North Pole and the South Pole |
| Tropic of Cancer | an imaginary line around the earth parallel to the equator and to the north of it |
| Tropic of Capricorn | an imaginary line around the earth parallel to the equator and to the south of it |
| Northern Hemisphere | The section of the Earth that is north of the Equator |
| Southern Hemisphere | The section of the Earth that is south of the Equator |
| Arctic | The Arctic is the region around the North Pole |
| Antarctica | The Antarctic is the earth's southernmost continent. It's the icy region around the South Pole. |
| Sea | A large body of salty water |
| Ocean | A huge body of salty water |
| Environment | Everything around us - the natural world of land, sea, air, plants and animals |
| Continent | A very large area of land that consists of many countries, such as Europe |