

CLIMATE ZONES: WHAT ARE THEY AND WHY DO THEY MATTER?

In this unit pupils will learn:

- Climate zones and biomes
- What climate graphs are used for

- How climate change is impacting the Earth

NATIONAL CURRICULUM

Locational knowledge

- ♣ 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
- ♣ name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time
- ♣ 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)

Place knowledge

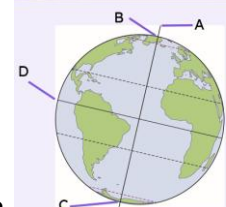
- ♣ understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America

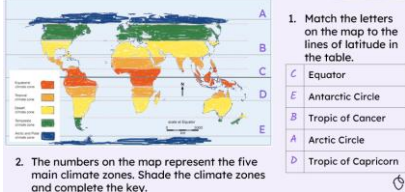
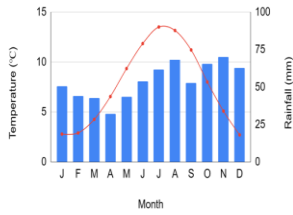
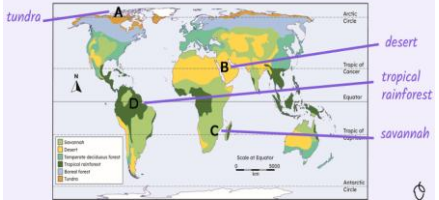

Human and physical geography

- ♣ describe and understand key aspects of:
 - ♣ physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle
 - ♣ 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

Geographical skills and fieldwork

- ♣ use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied

Lesson	Brief Overview	INK	Voocabulary								
What affects climate?	I can understand the position of the Earth in space in relation to the sun and how this affects climate.	 <p>Identify the features A - D on the diagram. Put the corresponding letter for each in the table.</p> <table border="1"> <tbody> <tr> <td>Equator</td> <td>D</td> </tr> <tr> <td>Tilted axis</td> <td>A</td> </tr> <tr> <td>North Pole</td> <td>B</td> </tr> <tr> <td>South Pole</td> <td>C</td> </tr> </tbody> </table>	Equator	D	Tilted axis	A	North Pole	B	South Pole	C	Solar energy, equator, poles
Equator	D										
Tilted axis	A										
North Pole	B										
South Pole	C										

<p>How do lines of latitude relate to climate zones?</p>	<p>I can understand what the main climate zones are and describe where they are found.</p>	 <p>1. Match the letters on the map to the lines of latitude in the table.</p> <table border="1"> <tr><td>C</td><td>Equator</td></tr> <tr><td>E</td><td>Antarctic Circle</td></tr> <tr><td>B</td><td>Tropic of Cancer</td></tr> <tr><td>A</td><td>Arctic Circle</td></tr> <tr><td>D</td><td>Tropic of Capricorn</td></tr> </table> <p>2. The numbers on the map represent the five main climate zones. Shade the climate zones and complete the key.</p>	C	Equator	E	Antarctic Circle	B	Tropic of Cancer	A	Arctic Circle	D	Tropic of Capricorn	<p>Latitude, weather, temperature, location</p>
C	Equator												
E	Antarctic Circle												
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<p>How can I explain a climate graphs?</p>	<p>I can read information from climate graphs and identify patterns in data.</p> <p>Climate graphs are special types of graphs used to show information about average weather conditions in a location. They show how average weather conditions change over time</p> <p>Climate data helps us to understand how the weather changes over time.</p> <p>Climate graphs can help us to spot patterns more easily because we can see some changes at a glance, without studying the numbers.</p>	<p>Identify:</p> <ul style="list-style-type: none"> The wettest month <i>November</i> The driest month <i>April</i> The hottest month <i>July</i>  <p>Temperature (°C) and Rainfall (mm) vs Month (J F M A M J J A S O N D)</p>	<p>Climate graph, data, horizontal axis and vertical axis</p>										
<p>What is the difference between climate zones and biomes?</p>	<p>I can understand and explain the difference between climate zones and biomes.</p> <p>Climate zones and biomes are not the same. Biomes relate to animals and plants as well as weather conditions.</p> <p>Climate zones can contain more than one biome.</p>	 <p>tundra, desert, tropical rainforest, savannah</p> <p>Explain to children about the equator and climate etc</p>	<p>Weather, climate, climate zone</p>										
<p>How do plants and animals adapt to live in different biomes?</p>	<p>I can understand how plants and animals have adapted to live in different biomes. Explore different animals and plants that adapt to their environment due to their biomes. Children will be able to remember the adaptations of the sloth and frog</p>	 <p>sloth: long limbs for swinging, curved claws to grab branches</p> <p>tree frog: sticky pads on feet for grip, long legs for strength and jumping</p>	<p>Biome, adapt, interdependent, environment</p>										

<p>What are the effects of climate change?</p>	<p>I can recognise that sudden changes in climate have an effect on living things. Children will understand what climate change is and how it is impacting Earth. They will also explore ways that they can reduce greenhouse gases in their day to day lives.</p>	<p>Climate change: Greenhouse gases are heating up the Earth impacting temperatures and rainfall.</p> <p>People are worried the animals and plants can't adapt quick enough to the changing conditions.</p> <p>Heatwaves and droughts are happening more often because of climate change.</p>	<p>Greenhouse gases, climate change, drought, heatwave</p>
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