

Topic: Geography Locational Knowledge/ Key question	Year group	Term
The Earth's Climate <i>How is climate change affecting our planet?</i>	Year 6	Spring 6 Questions

### Background knowledge

This investigation focuses initially on the personal stories of real people around the world who are being impacted upon by changes in the usual weather patterns. As such they are easier for young geographers to relate to because their circumstances are very much like their own and of their families and the communities in which they live. The scale of study is therefore local, whether the location is in The Gambia, Australia, the United Kingdom or Greenland.

The pupils are encouraged to see these apparently unconnected examples in the broader context of the concept of global warming on a global scale. They investigate the main manifestations of global warming and also spend time understanding its causes, particularly in relation to greenhouse gas emissions from the increased burning of fossil fuels. The enquiry culminates in pupils reflecting upon international agreements to reduce global warming, phase out the burning of fossil fuels and to develop renewable and carbon neutral sources of energy.

### Purpose of the enquiry

The challenge of changing patterns of weather that contribute to longer-term climate change trends across the globe, will undoubtedly be one of the greatest issues to confront primary school pupils during the remainder of the century. This enquiry gives pupils an insight into how changing patterns of weather at different locations around the world are impacting on the lives of real people with whom they can relate. Through the experiences of these individuals and communities, pupils are able to reflect upon how changes to normal and usual weather conditions can have to serious implications for these people. They are also able to appreciate that, generally speaking, the poorer the people and communities are that experience changes in weather patterns, the more serious the impact often is. From these specific case studies the pupils are encouraged to look at the concept of global warming, what is contributing to it on a global scale and to generalise about climate change in the longer term. The enquiry culminates in pupils understanding the action that is being taken during this century across the world to reduce fossil fuel consumption (and therefore carbon dioxide emissions) through the development of renewable sources of energy.

### What should I already know?

Year 4

#### 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.

- 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, water.

### **Geographical skills**

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

## **Year 5**

### **Geographical enquiry**

- Begin to suggest questions for investigating
- Begin to use primary and secondary sources of evidence in their investigations.
- Investigate places with more emphasis on the larger scale; contrasting and distant places
- Collect and record evidence unaided

### **Direction/Location**

- Use 8 compass points;
- To use 4 figure coordinates to locate features on a map.

### **Drawing maps**

- Begin to draw a variety of thematic maps based on their own data.

### **Using Maps**

- Compare maps with aerial photographs.
- Select a map for a specific purpose.
- Begin to use atlases to find out about other features of places.

National Curriculum Objectives / Key Skills	The Journey
<p>Pupils should be taught to:</p> <p><b>National Curriculum coverage Geography</b></p> <p>Pupils should be taught to:</p> <p><b>Locational knowledge</b></p> <ul style="list-style-type: none"> <li>• The countries (including the location of Russia), major cities and key physical and human geography of Europe.</li> <li>• 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.</li> </ul> <p><b>Place knowledge</b></p> <ul style="list-style-type: none"> <li>• Understand geographical similarities and differences through the study of human and physical geography of a region in a European country.</li> </ul> <p><b>Human and physical geography</b></p> <p>Describe and understand key aspects of:</p> <ul style="list-style-type: none"> <li>• Physical geography including climate zones and volcanoes.</li> <li>• Human geography including economic activity and trade links, and the distribution of natural resources including energy.</li> </ul> <p><b>Geographical skills</b></p> <p>Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied.</p>	<p><b>1:</b> Why is Elhaji cleaning shoes on the streets of Banjul?</p> <p><b>2:</b> Why can't Olivia afford to insure her home?</p> <p><b>3:</b> Why are people living in Starcross making flood plans?</p> <p><b>4:</b> Why do Lars and Sofie disagree about how nice the weather is?</p> <p><b>5:</b> To know why people all over the world are noticing that the weather they are used to is changing.</p> <p><b>6:</b> To know what the countries of the world have agreed to do about global warming?</p>

## **Big question and key skills**

### **The Earth's Climate**

How is climate change affecting our planet?

#### **Learning objectives**

During the enquiry pupils will have opportunities through the application and analysis of a wide range of geographical skills and resources to:

#### **Geographical enquiry**

- Suggest questions for investigating
- Use primary and secondary sources of evidence in their investigations.
- Investigate places with more emphasis on the larger scale; contrasting and distant places
- Collect and record evidence unaided
- Analyse evidence and draw conclusions e.g. from field work data on land use comparing land use/temperature, look at patterns and explain reasons behind it
- **Map Knowledge**
- Confidently identify significant places and environments using a range of maps.
- **Style of Map**
- Confidently use OS maps.
- Confidently use an atlas and analyse a range of thematic maps to identify human and physical features of a location.
- **Drawing maps**
- Draw a variety of thematic maps based on their own data.

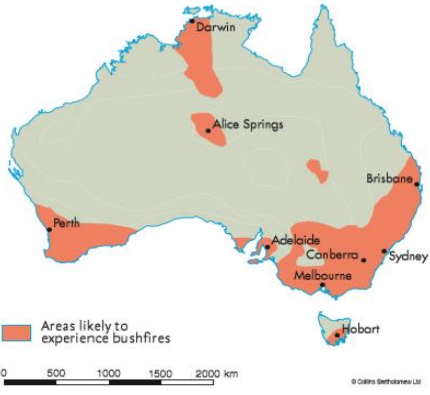
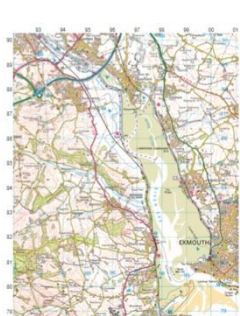
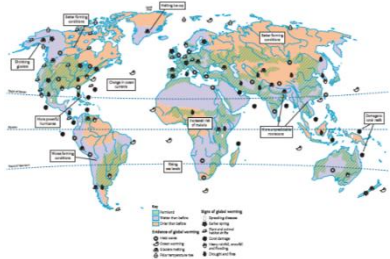
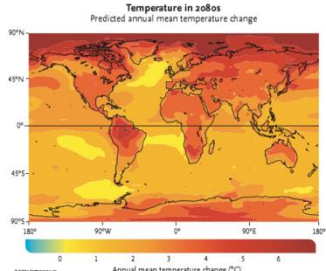
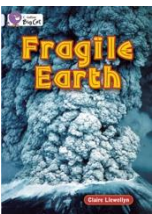

## Outcomes

### An overview of what children will know / can do

**Working towards:** Who is Elhaji and where does he work? How are weather patterns changing in South East Australia? Where is Starcross located - what physical features does it have? How does the climate of Greenland compare with the climate of Newcastle? How is the climate changing in different ways in different countries around the world? What are countries around the world doing to tackle the problem of climate change? An explanation of what climate change is and how countries around our planet are being affected in different ways.

**Expected:** What are the human and physical features of Banjul and Njar? What human and physical impacts are these changing weather patterns having on the area? What evidence proves this? Why does an area like Starcross need flood defences? How is the climate changing in Greenland - include statistical information. Explain why scientists think that these changes are occurring - back up your answer with statistical data. How are councils in the North East of England trying to reduce CO<sub>2</sub> emissions? A discussion of climate change in our local area and what is being done to tackle the problem on a national and local level.

**Exceeding:** Explain why Elhaji is not at home with his family? How can you link this to your knowledge of the climate in this area? How can you link these changes to other countries with changing weather patterns around the world e.g. The Gambia? How can you link this knowledge to your local area? Why do people disagree about the change in climate in Greenland? What do you predict is going to happen over the next 500 years in terms of climate change on Earth? And why? How does Beech Hill Primary produce CO<sub>2</sub> emissions and are there any ways that you think that these could be reduced? Recommendations and tips for our local community as to how we can reduce our CO<sub>2</sub> emissions.

Key Vocabulary	Timeline / Diagrams
<p>Key vocabulary / spellings.</p> <ul style="list-style-type: none"> <li>• Weather</li> <li>• Climate</li> <li>• Global Warming</li> <li>• Fossil Fuels</li> <li>• Carbon-dioxide</li> <li>• Renewable energy sources</li> <li>• Greenhouse gas</li> <li>• Emissions</li> <li>• Natural Disaster</li> <li>• Sustainable</li> </ul>	   
Text linked to topic	
<p><i>Fragile Earth</i>- Claire Llewellyn</p>  <p><i>Living with Climate Change</i> - Alison Sage</p> 	

Key people / places
<p>Weather Climate Global Warming Fossil Fuels Carbon dioxide Renewable energy</p>

Emissions  
Sustainable  
Carbon dioxide  
Greenhouse gases  
Natural Disaster

#### Assessment questions / outcomes

Why is Elhaji cleaning shoes on the streets of Banjul?  
Why can't Olivia afford to insure her home?  
Why are people living in Starcross making flood plans?  
Why do people disagree about how nice the weather is?  
Why are people all over the world noticing that the weather is changing?  
What have the countries of the world agreed to do about global warming?  
How is climate change affecting our planet?