



Exploring climate impacts



Introduction

Overview

This lesson explores climate change and its impacts around the world. Your pupils will step into the shoes of people in other countries, finding out about their ways of life and how climate change is having an impact today, and into the future.



Time required

60 minutes



Materials required

- Exploring climate impacts
- Exploring climate impacts slides
- Exploring climate impacts Quiz
- 'The future in...' worksheets

Learning objectives

- Describe the difference between weather and climate
- Share their understanding of climate change and its impacts
- Apply their knowledge to make a creative response, based on their understanding of the impacts of climate change on different communities around the world

Curriculum Links

- **English literacy and language** – written and verbal communication, comprehension and analysis
- **Science/sciences and technology** – prediction, methodology and evidence
- **Geography/social studies/the world around us** – weather, climate change, environment
- **Art and design/expressive arts** – storytelling, creative thinking

Activity steps



01

Ask the students if they think there is a difference between weather and climate.

Get your class to look out of the window. Ask your students, is it sunny? Is it cloudy? Is it raining? When you look out of the window you are noticing what the weather is doing today.

Weather describes the conditions of the atmosphere over hourly or daily measurements such as temperature, rainfall, cloudiness, sunshine, and wind speeds.

Climate, on the other hand, is the average of these conditions over longer time periods ranging from years to decades to hundreds of years.

The Met Office investigates both weather and climate, using its supercomputer to run simulations for the future. Alongside producing the weather forecast for tomorrow it makes predictions about what our climate will be like in years to come. This helps people and organisations around the world plan for the future.



5 minutes



Slide 2



Groupwork

Activity steps

02

Now we know the difference between weather and climate, what about climate change? In pairs or small groups, ask the students to discuss the phrase climate change. Some prompt questions could include:

- What is climate change?
- What does it make you think of?
- What are some of the impacts of climate change?
- How might climate change affect people around the world?

Once they have had some time to discuss, come back together as a group and get each pair to share one or more of their thoughts with the class.

Explain that since the Industrial Revolution, the average temperature of the planet has risen by around 1°C. This might not sound very much, but this is a rapid change in terms of our global climate system. Previously, natural global changes are understood to have happened over much longer periods of time. It is also important to remember that the world is not warming evenly, so the temperature increase is higher than 1°C in some countries.

The UK has also seen a rise in temperatures with the 5 warmest years occurring since 2006. Refer to slide 4. Cooler years are blue, while warmer years are red.

Human activity – from releasing greenhouse gases and aerosols (small particles) into the atmosphere, to changing the use of land – is the main driver of climate change. Climate change is having a range of impacts on the climate system, ecosystems, and people. Our sea levels are rising, extreme weather events are becoming more frequent and intense, and plant, animal and human health are all being affected. Your pupils might have mentioned some of these in their discussions. To help support your discussion, we have a briefing note available for you on extreme weather and climate change. You can find this [here](#).



10 minutes



Slides 4



Groupwork

Activity steps

03

Show your class the world map on side 5 and tell them that they are going to think about the lives of children and their families in the six different locations and explore how climate change might impact them in the future.

To begin, working in pairs or small groups, give the students the Climate Impacts Quiz. They will use this to find out a little bit about each country and how climate change might affect it by the year 2050. For each country, they should match up the fact about the country with a projected change in its climate, a possible impact of that change, and a suggestion about what could be done to help manage the impacts. There is one right combination for each country.

You can print out the student Climate Impacts Quiz worksheet and cut it up in advance, so that the students can move the answers around to make the right combinations.

Once they've completed the quiz, you might want to talk through each country and consider what else could be done to manage the impacts of climate change described.



15 minutes



Slides 5-11



Groupwork

04

Working individually, give each student a copy of the “The future in.....” worksheet.

Each student should pick one of the six locations they have looked at, and then describe, in any way they want to, through poetry, a story, pictures, of what life might be like for children and their families in their location, in 2050.



20 minutes



Individual task

Activity steps

05

Bringing the lesson to a close, come together as a class and discuss how we can reduce the impacts of climate change – both on ourselves and other people around the world. Encourage your students to think about both mitigation – that’s reducing our greenhouse gas emissions – and also adaptation – that’s changing the way we live to help us manage the impacts. Tell the students that the most crucial step to limit the negative impacts of climate change is to make big and quick reductions in global greenhouse gas emissions. There are many different ways this can be done and governments, businesses, organisations and individuals around the world can all contribute. We can fly less, drive less, use less energy and even eat a bit less meat and dairy. We can help develop new technologies and ways of living and working to adapt to the extremes of weather today and the changes we will see in the future.

Are there any other things that we can ask our ourselves and our community to do?



10 minutes



Groupwork