



Lesson 5: What is Climate Change?

This lesson is designed to last 1 hour and will develop students' understanding of what is meant by climate change.

As a result of participating in this session, students will be able to:

- **REMEMBER** what climate change is.
- **UNDERSTAND** what causes climate change.
- **EXPLAIN** the effects of climate change on our planet.

Curriculum Links

Key-Stage 3 Geography

- Understand, through the use of detailed place-based exemplars at a variety of scales, the key processes in:
 - Physical geography relating to geological timescales and plate tectonics; rocks, weathering and soils; weather and climate, including the change in climate from the Ice Age to the present; and glaciation, hydrology and coasts.
 - Human geography relating to population and urbanisation; international development; economic activity in the primary, secondary, tertiary and quaternary sectors; and the use of natural resources.
- Understand how human and physical processes interact to influence and change landscapes, environments and the climate; and how human activity relies on the effective functioning of natural systems.

Key-Stage 3 Science

- The production of carbon dioxide by human activity and the impact on climate.

Lesson Resources

- https://www.youtube.com/watch?v=G4H1N_yXBIA
- Images of natural disasters/extreme weather

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| <p>10 mins</p> | <p>Introduction/Do Now Task:</p> <p>Ask students to consider each of these statements and decide whether they think they are true, partly true or false.</p> <ol style="list-style-type: none">1. Renewable energy is too expensive for most people to afford.2. The Earth's climate has always changed – climate change is nothing new.3. Carbon dioxide levels are at their highest level for 800,000 years.4. Climate change has been caused by emissions from China.5. Animals and plants will adapt to climate change.6. Global warming will mean it will be like summer all the time. <p>Suggested responses:</p> <ol style="list-style-type: none">1. Renewable energy is too expensive for most people to afford. FALSE: mains electricity generated in the UK costs less from wind or solar.2. The Earth's climate has always changed – climate change is nothing new. PARTLY TRUE: the climate has changed in the past but at a much slower rate than it is doing now.3. Carbon dioxide levels are at their highest level for 800,000 years. TRUE.4. Climate change has all been caused by emissions from China. FALSE: whereas China is a major source of greenhouse gas emissions, many other countries are also sources. China is a major investor in green technology.5. Animals and plants will adapt to climate change. PARTLY TRUE: but such adaptations will take many organisms a much longer period of time.6. Global warming will mean it will be like summer all the time. FALSE: one of the effects of global warming is the increased incidence of severe storms. |
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| <p>15 mins</p> | <p>Starter Task: What causes climate change? Show students the information video on greenhouse gases, and how they warm the planet.</p> <p>https://www.youtube.com/watch?v=G4H1N_yXBIA</p> <p>Whilst watching the video, students should extract information to answer the following questions. Note that this may involve stopping the video at points or showing it more than once.</p> <ol style="list-style-type: none"> 1. Name the gases that are responsible for the greenhouse effect. 2. Name the four things that the video suggests are affected by climate change. 3. Write a sentence for each of those four things, giving an example of how they may change. |
| <p>25 mins</p> | <p>Main Task: Explaining climate change.</p> <p><i>“Imagine that you have a younger brother or sister who is in KS2; they come home from school one day and ask you what climate change is. You decide to explain it in a way that will be able to understand. Your explanation should also discuss ways in which humans are affecting this and ways that we can reduce global warming.”</i></p> <p>Students should spend about ten minutes working on this as a group of two or three, and then present it to another group (and hear theirs). They should use the following as success criteria to both guide what they prepare and also to use as a basis for providing feedback to other students.</p> <p>Success Criteria Does the presentation:</p> <ul style="list-style-type: none"> • Explain clearly what the greenhouse effect is? • Identify at least two greenhouse gases? • Describe ways in which humans are impacting on the climate? • Identify at least two ways that humans can reduce the greenhouse effect and stop global warming? <p>In addition:</p> <ul style="list-style-type: none"> • Is it suitable for the target age range? • Is it engaging? • Is it clear and well structured? |
| <p>10 mins</p> | <p>Plenary:</p> <p>Displaying pictures of natural disasters/extreme weather around the room. Prompt students to discuss with the person next to them what they may be and why they think these are the effects of climate change.</p> <p>Images to be linked to climate change, such as melting ice caps, drought, forest fires and flooding etc. Click on the links below to download.</p> <p>Melting ice caps Drought Forest Fires Flooding</p> |



Thank you for incorporating our resources into your teaching. Your feedback is valuable to us as we strive to improve and enhance our materials. We kindly ask that you take a few moments to complete the online feedback questionnaire. Your insights and suggestions will help us better support you and your students in the future.

