

Year 5 and 6 Curriculum: Climate Crisis

In this topic your child will learn about the effects the changing climate are having and sustainability

Core Knowledge

What is Climate Change?

Climate change (or global warming), is the process of our planet heating up. Scientists estimate that since the Industrial Revolution, human activity has caused the Earth to warm by approximately **1°C**. While that might not sound like much, it means big things for people and wildlife around the globe.

What causes Climate Change?

1. Burning fossil fuels

Over the past 150 years, industrialised countries have been burning large amounts of **fossil fuels** such as oil and gas. The gases released into the atmosphere during this process act like an invisible 'blanket', trapping heat from the sun and warming the Earth. This is known as the "**Greenhouse Effect**".



2. Farming

Believe it or not, cows' eating habits contribute towards climate change. Just like us, when cows eat, methane – a type of greenhouse gas – builds up in their digestive system and is released in the form of... a *burp*! This might sound funny, but when you imagine that there are almost 1.5 billion cows releasing all that gas into the atmosphere, it sure adds up!



3. Deforestation

Forests absorb huge amounts of carbon dioxide – another greenhouse gas – from the air, and release oxygen back into it. The Amazon Rainforest is so large and efficient at doing this that it acts like our planet's air conditioner – limiting climate change. Sadly, many rainforests are being cut down to make wood, palm oil and to clear the way for farmland, roads, oil mines, and **dams**.

How does Climate Change affect us?



Physical

A warmer climate could affect our planet in a number of ways: more rainfall, changing seasons, shrinking sea ice and rising sea levels

Wildlife

Climate change is already affecting wildlife all over the world, but certain species are suffering more than others. Polar animals – whose icy natural habitat is melting in the

warmer temperatures – are particularly at risk. It's not just polar animals who are in trouble. Apes like orangutans, which live in the rainforests of Indonesia, are under threat as their habitat is cut down, and more droughts cause more bushfires.

Key Vocabulary

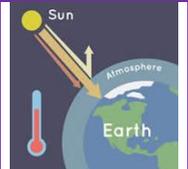
Climate

The long term average conditions of temperature, wind and rainfall



Greenhouse Effect

a process that occurs when gases in Earth's atmosphere trap the Sun's heat.



Developing country

A country with less industry and money



Sustainability

The ability to maintain something at the same rate



Dam

a barrier that stops or restricts the flow of water



Environment

The air, water and land in or on which people, animals and plants live.



Fossil Fuels

Formed from organic material over the course of millions of years. Coal, oil and natural gas, are currently the world's primary energy source



Sea turtles rely on nesting beaches **to** lay their eggs, many of which are threatened by rising sea levels. Did you know that the temperature of nests determines whether the eggs are male or female?

Human

Climate change won't just affect animals, it's already having an impact on people, too. Most affected are some of the people who grow the food we eat every day. Farming communities, especially in **developing countries**, are facing higher temperatures, increased rain, floods and droughts.



What can I do to help stop climate change?

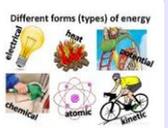


Small changes in your own home can make a difference, too. Try switching to **energy**-saving lightbulbs, walking instead of using the car, turning off electrical items when you're not using them, recycling and reducing your food waste. All these little things can make a difference.

Environmental Sustainability

Sustainability is most often talked about in relation to the environment. The earth has a lot of finite resources that won't last forever unless used sustainably, including oil, fossil fuels and natural gasses like Methane. We use these to do everything from heat our houses to power our cars, but we are using them faster than we can create more, meaning they are unsustainable. Because of this, scientists and governments are encouraging people to use sustainable forms of renewable energy like solar and wind power. These are types of energy that come from the environment around us and which cannot be used up. We can use wind farms to harness the wind, and solar panels to turn the sun into energy and electricity. This energy can then be used as a **substitute** for unsustainable energy sources like coal, oil and gas. Many people are already doing things like driving electric cars to help make the **environment** more sustainable. Environmental sustainability also refers to animals and other species and ensuring that they do not go extinct.



Renewable Energy	Energy that is collected from renewable resources, which are naturally replenished, such as sunlight, wind, rain, tides, waves and geothermal heat.	
Substitute	To put or use (someone or something) in place of someone or something else	
Energy	How things change and move, it's everywhere around us and takes all sorts of forms.	

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Context Quiz

Question	Answer
What is climate change?	Climate change is the process of our planet heating up
What are three things that can cause climate change?	Burning Fossil Fuels, Farming and Deforestation
What is the Greenhouse Effect?	Gases released into the atmosphere during this process act like an invisible 'blanket', trapping heat from the sun and warming the Earth
Why do we need rainforests?	Forests absorb huge amounts of carbon dioxide and release oxygen

Why does deforestation happen?	To make wood, palm oil and to clear the way for farmland, roads, oil mines, and dams
How does climate change affect Earth physically?	More rainfall, changing seasons, shrinking sea ice and rising sea levels
What ways can climate change affect our planet?	more rainfall, changing seasons, shrinking sea ice and rising sea levels
Why does climate change affect animals in polar regions?	Their icy, natural habitat is melting in warmer temperatures
Can you name the types of renewable energy?	sunlight, wind, rain, tides, waves and geothermal heat.

Useful websites to support your child with this topic



https://www.bbc.co.uk/bitesize/topics/z849q6f/articles/z7dkhbk	https://www.theschoolrun.com/homework-help/caring-environment
https://www.greenpeace.org.uk/	https://www.greenpark.co.uk/wildlife-environment/wind-turbine-visitor-center/