

Climate Change

This term, we will explore climate change, with a special focus on the role the USA and China play in the release of greenhouse gases. We will look at the many impacts of climate change, including extreme weather, flooding and destruction of habitats.

What are the causes of climate change?

- Climate change is like a big puzzle with lots of pieces that fit together to change our planet's weather and environment. Imagine our Earth wearing a big, cosy blanket made of gases like carbon dioxide and methane. When we burn things like coal, oil, and gas for energy, or cut down lots of trees, we add more of these gases to the air. This makes the Earth's blanket thicker, trapping more of the Sun's warmth and making the planet hotter. This can lead to more extreme weather, like really hot days, big storms, and less predictable seasons. So, the main causes of climate change are the gases we release into the air and the changes we make to the land, all of which add up to a warmer Earth.



A starving polar bear, which has lost its habitat and therefore its food source. This is as a result of climate change.

Greenhouse gases

Greenhouse gases are special gases in the air, including **carbon dioxide**, **methane**, and **water vapour**, that trap the Sun's warmth. Without them, Earth would be too cold for us to live! But, if we have too many greenhouse gases, it's like having too many blankets on a warm night.

- Carbon Dioxide:** Carbon dioxide is a colourless gas with a faint, sharp odour and a sour taste; it is produced by burning organic products and by respiration and is absorbed by plants in photosynthesis.
- Methane:** Methane is a colourless, odourless, produced naturally by the decomposition of organic matter and used as a fuel or energy source.
- Water Vapour:** Water vapour is the gaseous form of water, present in the air naturally, resulting from evaporation or boiling, and is a major component of the Earth's atmosphere, contributing to the greenhouse effect and weather patterns.

Key Vocabulary

Climate Change: A big change in the Earth's weather patterns, making it warmer and causing more extreme weather.

Greenhouse Gases: Special gases in the air, like carbon dioxide, methane, and water vapour that trap the Sun's warmth.

Carbon Dioxide (CO₂): A colourless gas produced by burning things like coal, oil, and gas, as well as by animals when they breathe out. It's a key greenhouse gas that makes the Earth warmer.

Methane (CH₄): A colourless, odourless gas that comes from places like landfills and wetlands, as well as from cows. It's much better at trapping heat than carbon dioxide, making it a very powerful greenhouse gas.

Key Vocabulary

Water Vapour: Water in its gas form, which is part of the air we breathe. It's also a greenhouse gas that helps to keep our planet warm.

Global Warming: The increase in Earth's average temperature due to the build-up of greenhouse gases in the atmosphere.

Sea Level Rise: The increase in the level of the world's oceans caused by the melting of ice caps and glaciers, as well as the expansion of sea water as it warms, leading to flooding of coastal areas.

Extinction: The permanent disappearance of a species from Earth. Climate change can lead to extinction by changing the natural habitats that plants and animals need to survive.

TASK

During our topic on climate change, we are going to be looking at the causes and consequences of climate change.

Your task will be to independently research and create a piece of learning on either a cause or a consequence of climate change.

- Make a fact file
- Make a poster
- Prepare a short presentation

What are the consequences of climate change?

Climate change leads to a lot of big changes on our planet, kind of like dominoes falling one after the other.

- First, it makes the Earth hotter, which can cause more extreme weather like very hot days, heavy rainstorms, and powerful hurricanes.
- It also melts ice at the poles, which makes sea levels rise and can flood places where people live.
- Animals and plants can struggle to survive these changes, and some might even become extinct if they can't find new homes.
- Farms can have a harder time growing food because of the weird weather, making it tougher for everyone to find enough to eat.

Climate change is really about how a warmer Earth leads to lots of problems, from the bottom of the oceans to the top of the mountains, affecting everything from tiny bugs to big cities.

The Greenhouse Effect

