

Year 5 Climate Change and Pollution

Spring 2

Topic Vocabulary

Climate change	Climate change is a change in the overall weather and temperature on Earth. (Not the day-to-day weather). The Earth is getting warmer due to some of the things humans are doing. This means it will be more difficult for living things to survive.
atmosphere	The layer of gas surrounding the Earth.
Fossil fuels	Natural resources from the ground that are burnt to create energy
Non-renewable energy	Non-renewable power sources such as coal, oil and gas can't be replaced once they have been used.
Renewable energy	Renewable power sources can be replaced. Solar, wind, geothermal and wave power are all examples
Power	Electricity, gas and oil are all sources of power. They give us energy to make things work.

What do greenhouse gases do?

Life on Earth is possible because of the warmth of the sun. While some of the incoming light, heat and radiation from the sun bounces right back into space, some of it is trapped by the greenhouse gases that make up our atmosphere.

These greenhouse gases are a bit like the Earth's blanket! Without this layer of insulation, Earth would simply be a frozen rock hurtling through space - it is a really important layer!

However, the Earth's blanket has got far too thick and is now causing problems across the globe. One of the impacts of a changing climate in the last few decades is Global Warming.

The average temperature across the planet has increased, due to an increase in the atmosphere of a greenhouse gas called Carbon Dioxide. This increase is thought to be because of the use of fossil fuels by humans.

What is the difference between weather and climate?

TIME!

WEATHER

Weather is the day to day conditions.
It's what you see outside on any given day.
Weather events include snow, rain, sun and wind. These happen in a particular place and can vary across a local area.

CLIMATE

Climate is the big picture. It's the average weather conditions over a long period of time.
Climate covers a large region, sometimes a whole country.

Climate Zones

- Tropical** → Hot and humid, where rainforests are
- Temperate** → Mild summers and winters
- Arctic/Polar** → Cold for most of the year
- Arid** → Dry, found in deserts
- Continental** → Short hot summers and long cold winters
- Mediterranean** → Hot dry summers, cool wet winters

Which human activities are creating climate change ?

Food waste	- About 1.3 billion tonnes or one third of the food produced in the world for human consumption every year is lost or wasted throughout the supply chain, from production to consumption - nearly one-third of the food that is produced in the world is lost or wasted due to one reason or the other.
Air travel	- Air travel generates large amounts of greenhouse gases –the specific types emitted depend on the type of aircraft in use. - The number of flights globally is expected to reach 39.4 million in 2019. This figure is over one million higher than the prediction for the previous year and represents an increase of over 50 percent from the previous decade
Plastics	- Throwaway/single use plastic packaging makes up 40% of the demand for plastic - Plastics create long lasting rubbish: for example plastic bottles can take about 400 years to degrade naturally. 40% of plastic packaging waste is disposed of at sanitary landfills, 14% is burnt and 14% is collected for recycling. Burning creates the most CO2 emissions among these methods.
Junk food	- Producing one hamburger (normally eaten in less than 5 minutes) uses many different resources [–water, animal feed and land for grazing] and uses the same amount of fossil fuels as driving your car for 20 miles. - To put into context: the average American consumes 209 pounds of meat per year. Multiply that by the population of three billion, and we're easily looking at 627 billion pounds of meat a year.

If the Earth was an hour old:

