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Climate change explained

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Climate change refers to long term shifts in temperature and weather patterns. This can occur naturally, due to minor variations in the planet's orbit, changes in the sun's activity or large volcanic eruptions.

But since the 1800s, human activity has been by far the main cause of climate change, mainly due to the burning of fossil fuels like coal, oil and gas.

Blackpool has experienced its own shifts in weather patterns. In Blackpool between 1961 to 1990 and 1991 to 2020:

- The temperature has increase by approximately 1°C
- The number of days with frost has increased by 12 days
- The number of hours of sunshine has increased by 61 hours
- The average amount of rainfall has increased by 33mm
- The number of days of rainfall greater than 1mm has increased by 7 days

Learn more about the science of climate change below.

Climate change explained

The climate has always fluctuated. But from the mid-20th century, human activity has led to a significant increase in carbon dioxide (CO₂) and other greenhouse gas emissions. This is rapidly changing our climate, influencing weather systems and patterns including the jet streams and ocean currents.

The most notable impact of climate change is global warming – the gradual increase in the overall temperature of the Earth's atmosphere. While this rise in temperature may be taking place over time, it has many devastating effects including rising sea levels and extreme weather events. This impacts on ecosystems and animal habitats, as well as human settlements.

Causes of climate change

Climate change is connected to the carbon cycle. The carbon cycle normally helps to keep carbon dioxide levels in check so the planet is warm enough for humans to inhabit it – this is known as the 'greenhouse effect'.

The greenhouse effect is integral for us to survive. Without it, the planet would be around 30°C cooler and uninhabitable for humans. However, human activities like agriculture and the burning of fossil fuels are increasing the effect, making our planet warmer.

Too much heat gets trapped around the earth's surface, causing climate change. Global leaders have agreed to work towards limiting warming to 1.5°C above pre-industrial levels by 2100. This target was set to prevent the most extreme and irreversible effects of climate.

[Learn more about the activities that have caused climate change.](#)

"Overconsumption" is recognised by scientists as a major contributor to climate change. We are using more energy than is needed to meet our needs, so reducing the amount of waste we create is essential to tackling climate change.

Impact of climate change

Climate change makes extreme weather more likely. This effects farming, buildings, infrastructure and human health.

Changing rain and heat patterns have affected crop growth and quality in some of the world's key food growing regions. This is predicted to get worse as the planet warms.

Despite this, positive solutions to climate change can create benefits for everyone. According to a [CDP report](#), these benefits include:

- Efficient homes and reduced energy bills
- Cleaner air
- The creation of green jobs
- Improved public health
- Protection of wildlife
- Increased green spaces

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