

What is climate change?

Climate change and the Reef

It's getting hot in here!

The Earth's climate is warming. Based on information collected from tree rings, long-lived corals, and bubbles trapped in ice cores, scientists can tell that the world is warmer now than it has been in more than a thousand years. This trend is called climate change.

The greenhouse effect...

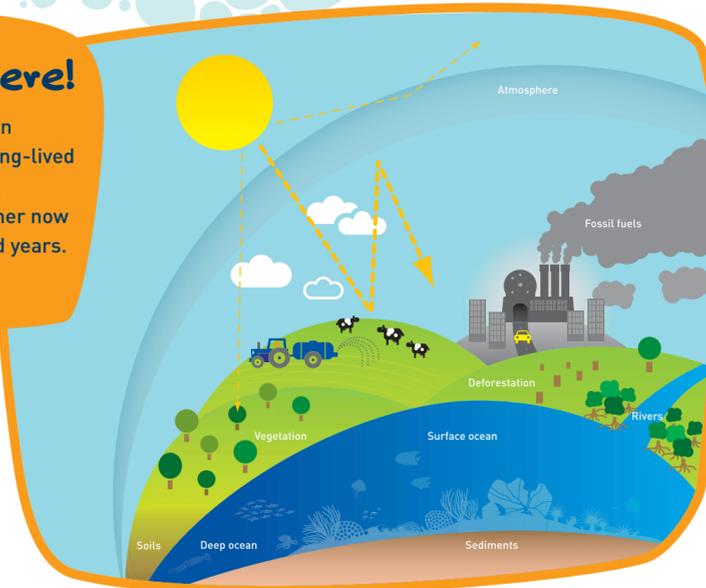
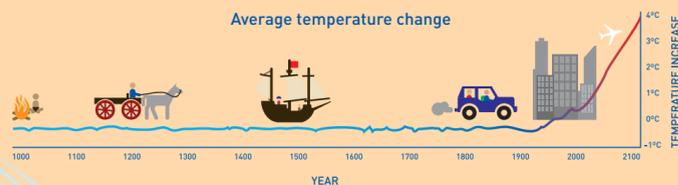
Our planet is naturally warmed by a phenomenon called the greenhouse effect. Water vapour, carbon dioxide, methane and other greenhouse gases have been present in the Earth's atmosphere for millions of years. Gases in the atmosphere act like a blanket around the Earth, trapping heat from the sun and keeping our planet warm.

We're driving climate change

We rely on the greenhouse effect to keep the Earth at a temperature suitable to sustain life. However, human activities like burning fossil fuels such as coal, gas and oil and clearing forests are causing greenhouse gas concentrations to rise above natural levels. As the blanket of gases surrounding the planet thickens, more and more heat from the sun is trapped within the atmosphere, slowly heating up the Earth and seas.

Our planet is continuing to warm. The past decade was the warmest on record and the amount of carbon dioxide in the atmosphere is higher now than at any time in the last 420 000 years.

While dramatic changes in global climate have occurred before in the Earth's history, human activities are causing our climate to change faster than ever before – and this will mean big changes for us.



What makes carbon dioxide?

- > Burning living things like trees makes carbon dioxide.
- > Burning fossil fuels like coal, petrol or natural gas (this is how we create most of our electricity) releases carbon that has been stored underground for many millions of years.
- > Humans and other animals make carbon dioxide when breathing out.
- > Plants use up carbon dioxide so cutting down forests means more carbon dioxide ends up in the atmosphere.

Climate change is happening now and it's time for us all to take action.

Feeling the heat

We are already seeing changes caused by climate change. Glaciers are melting, severe storms and droughts are more frequent, and plants and animals are being forced from their habitat.

- > The average temperature of the Earth's surface has risen by 0.6°C over the last 100 years and small changes in average temperature mean big changes in weather.
- > The number of category four and five cyclones has nearly doubled in the last 30 years.
- > At least 279 species of plants and animals are moving closer to the poles in response to our warming climate.
- > The flow of ice from melting glaciers in Greenland has more than doubled over the past decade.

Climate vs weather

Climate change is causing changes to weather conditions worldwide. But what's the difference between weather and climate?

Weather: short-term changes in the atmosphere (like rain, snow, sun or thunder and lightning).

Climate: the average weather in a location over a long period of time (a place that doesn't get much rain over many years would have a dry climate).

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