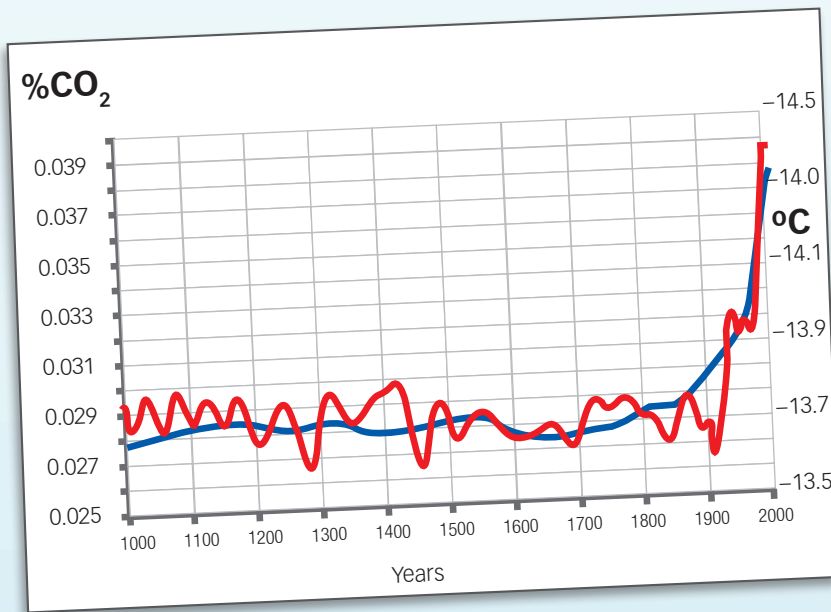




CLIL: Science



The Greenhouse Effect

Greenhouses are made out of glass, and people use them to grow crops in places where there is not a lot of sunlight. A greenhouse lets heat from the sun in, but it doesn't let it out again. So, it can hold heat and stay warm long after it has become cold outside.

Now, think of the Earth as a giant greenhouse. **Greenhouse gases** in the atmosphere act like the glass in a greenhouse. They allow heat from the sun to enter the atmosphere, but don't let all of it leave afterwards. This makes the planet warm and this is called the **greenhouse effect**.

More heat is trapped inside the planet when there are more greenhouse gases. Apart from water vapour, the most common greenhouse gas is carbon dioxide – and humans are responsible for a lot of it. In the graph, the blue line represents the percentage of carbon dioxide in the atmosphere. In 1000, it was 0.028% but from around 1700 we started to burn lots of **fossil fuels** such as oil, gas and coal. Burning fossil fuels causes carbon emissions, so the amount of CO₂ in our atmosphere began to rise. So, today, the number is over 0.04%.

The graph also shows the average global temperature – the red line – and we can see that it has risen a lot since 1700, too. In 1000, it was about 13.7°C but today it is around 14.5°C. There is a clear link between carbon dioxide emissions and the average global temperature, and this is called **global warming**.



Check these words

vapour, carbon dioxide, carbon emission, average

Listening & Reading

1 Look at the graph. What does it show? What does it have to do with the greenhouse effect?

Listen and read to find out.

2 Read the text and complete the sentences (1-4) with words from the text.

- 1 Greenhouses gases are similar to in a greenhouse.
- 2 and water vapour are greenhouse gases.
- 3 Oil, gas and coal are all
- 4 The greenhouse effect is linked to

Speaking & Writing

3 Make sentences using the phrases in bold in the text.

4 **ICT** Research information about our carbon footprint, and how we can reduce the amount of carbon we produce in our lives. Tell the class.