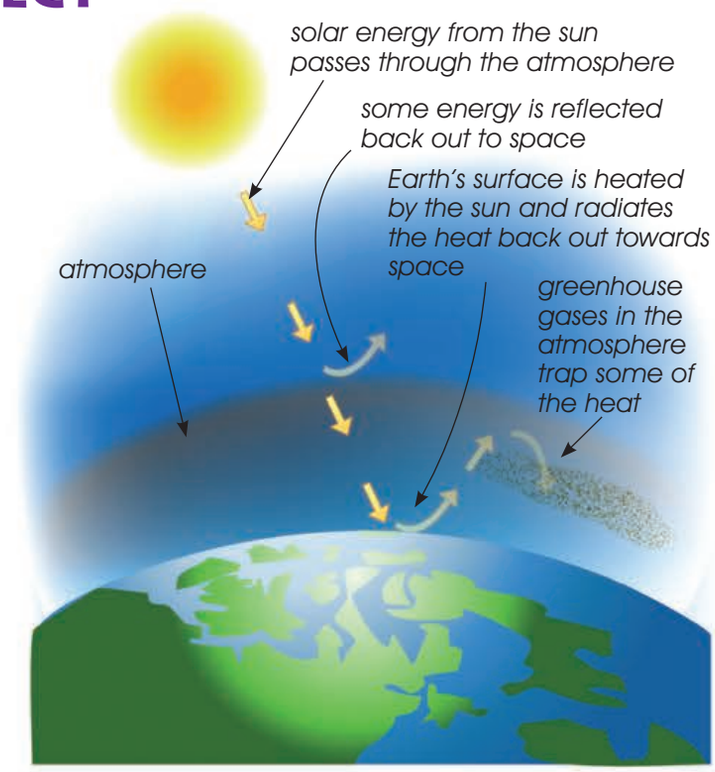
Greenhouse Effect - fact sheet 3

SIDE A

The Greenhouse Effect

Some gases in the upper atmosphere trap heat like a blanket around the Earth. Without these gases the average temperature of the Earth would be about 18°C BELOW ZERO, instead of its life-supporting 15°C ABOVE ZERO. (The Earth would be like the Moon – very cold!)



These heat-trapping gases are called "**greenhouse gases**".
The main ones are:

- Water vapour (H_2O)
- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)

Greenhouse gases occur naturally, however **human activities** have **increased** the amounts of **greenhouse gases** in the atmosphere.

Greenhouse Gases & human activities

Carbon dioxide

Humans add more carbon dioxide (CO_2) to the atmosphere by:

- burning fossil fuels (oil, natural gas, and coal)
- cutting down and burning forests

carbon dioxide

Methane

Humans add more methane (CH_4) to the atmosphere when:

- making fossil fuels
- leaving rubbish to decompose in landfill sites and when farming

methane

nitrous oxide

Nitrous oxide

Humans add more nitrous oxide (N_2O) to the atmosphere by:

- farming
- industrial activities
- burning fossil fuels

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Climate Change - Fact Sheet 3

SIDE B

Climate Change

Scientists from all over the World agree that the **average temperature** of the **World** has **increased** in the last 100 years as a result of burning fossil fuels.

This **human-made** temperature rise is called **Global Warming**. Increased temperatures are changing the whole climate and have triggered more extreme weather. In some places warmer weather means more rain, in other places it means less rain.

Unfortunately it is the areas which **already** get flooding and heavy rain which are getting **more** rain, and the areas which were **already** suffering from drought, which are getting **less** rain.

It is **predicted** that in the next 50 years or so the World's climate is going to change even more, because:

global temperatures will continue to rise and trigger even more extreme weather.

Climate change predictions

- Average World temperature will continue to increase.
- Places which normally get heavy rain will have increased chances of very heavy rain and flooding.
- Areas which have very little rain will get even less and become more desert-like.
- There are likely to be more storms and more hurricanes.
- Sea levels will rise as rising temperatures start to melt the Arctic ice cap.
- Millions of people in coastal cities and communities may have to abandon their homes and livelihoods due to constant flooding.
- Many species of animals and plants will become extinct.
- Diseases like malaria will spread.