

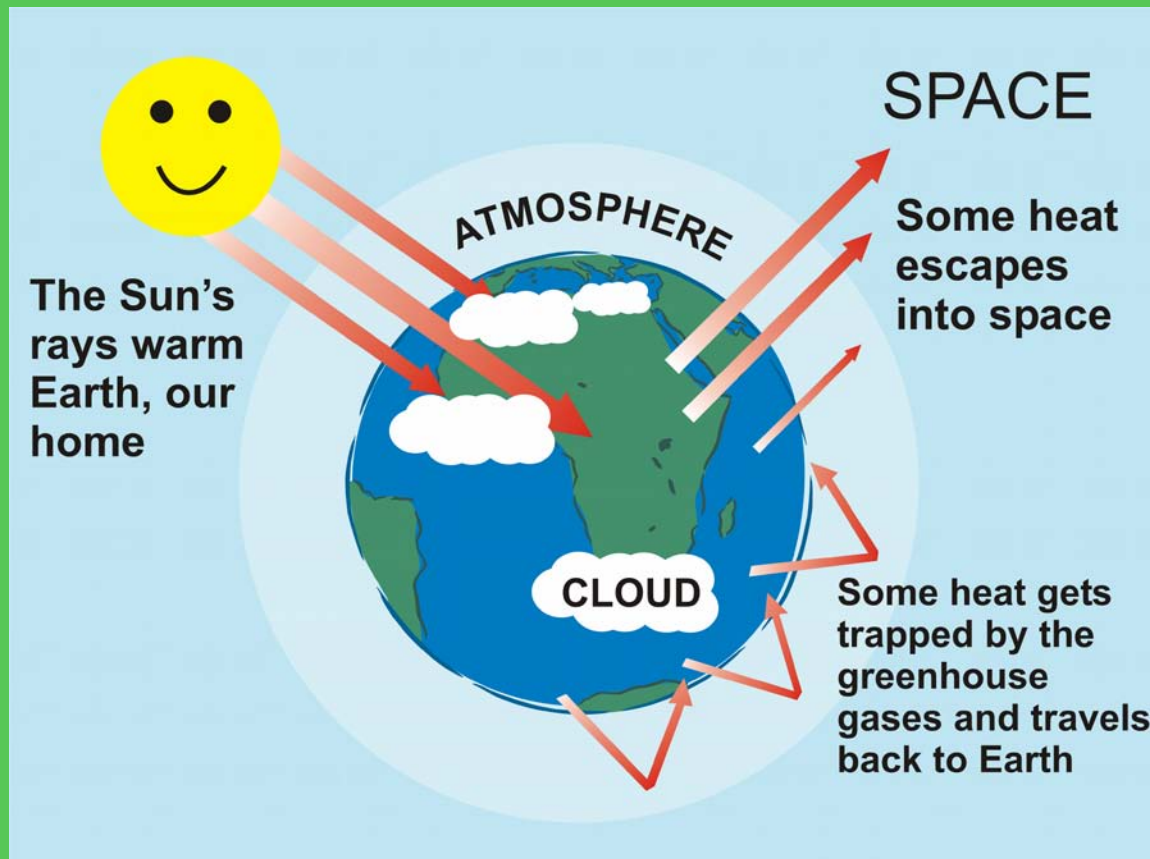
What keeps the planet warm?

The Greenhouse Effect

Assembly Plan

What's happening on Earth?

The **atmosphere** is made up of gases around the Earth
They are called **greenhouse gases**. The atmosphere lets sunlight
pass through easily but stops some of the heat getting out.



Why do we need the greenhouse effect?

Without the greenhouse gases, the Earth would be about 33 C colder.

It would not be warm enough for plants and animals to survive.

The way that greenhouse gases keep the atmosphere at a nice temperature is called the **greenhouse effect**.



Carbon Dioxide

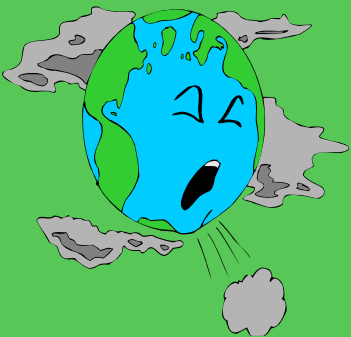
Carbon dioxide is the most important greenhouse gas.

Carbon dioxide is an invisible gas and is all around us. Plants need it to survive and animals (like us) breathe it out.

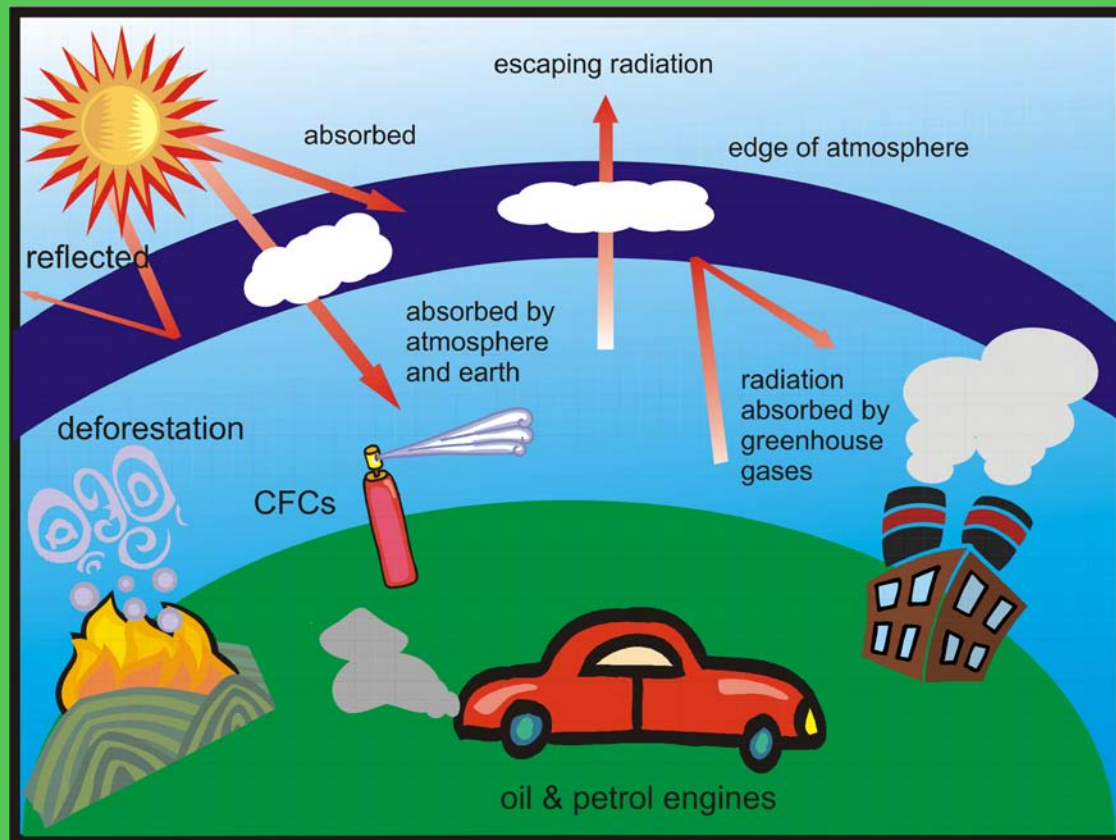
Over the past 10,000 years the amount of carbon dioxide in the atmosphere has been about the same. The amount made has been balanced by the amount used. This has been controlled by stores and sinks. But this balance is changing.

Carbon dioxide is made is by burning fuels like coal, gas and wood.

Cars that run on petrol and diesel make carbon dioxide. In the last 100 years humans have been making far more carbon dioxide than ever before and so far more carbon dioxide is entering the atmosphere.



Why is this bad?



Over the past 100 years the amount of carbon dioxide being released into the atmosphere has dramatically increased.

Today about 6 to 7 billion tonnes of carbon are emitted a year when fossil fuels are burnt in power station, by industry, by various kinds of **transport** and in our homes.

Think about how many more cars there are now than 100 years ago.....₅



Global warming

- Increases in greenhouse gases such as Carbon Dioxide is contributing to global warming.

Effects of global warming

- The average temperature around the world may go up by between 1.4°C and 5.8°C over the next 100 years.
- There may be fewer rainforests, so fewer trees to use up the carbon dioxide. Rainforests may start to die and give out more carbon dioxide, making it even warmer
- The level of the sea could rise by 10 cm - 90 cm (almost 1 metre). This would mean that as many as 90 million people around the world could have their homes flooded every year

