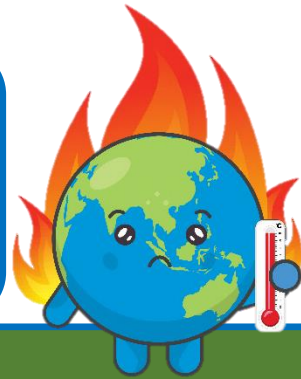


How does recycling effect climate change?

Our planet is changing

The human population is increasing at a fast rate. With this, the demand for goods and resources has also increased. As a result, the climate is changing and this is having consequences globally.



What is climate change?

The climate is changing due to increased levels of greenhouse gases in our atmosphere. This is because over the past 100 years, more fossil fuels such as coal, oil and gas have been burned to produce energy. Burning these fuels release greenhouse gases such as carbon dioxide (CO₂) and Methane (CH₄).

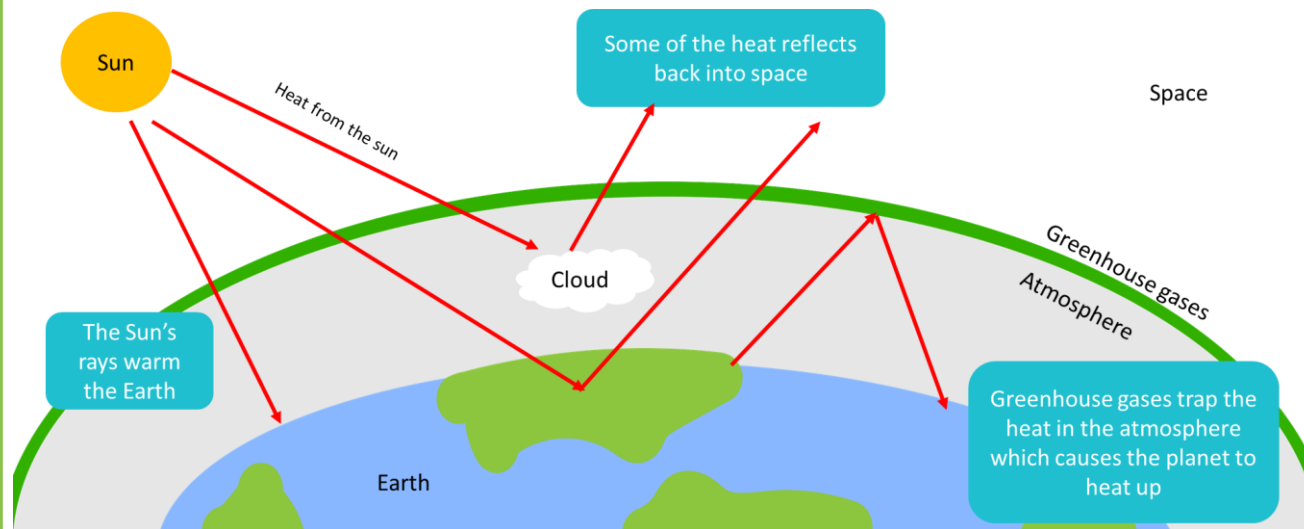


Fig1: diagram showing the greenhouse effect

How is climate change effecting our planet?

- Sea level is rising due to increased temperature causing ice to melt. This is causing low-lying areas to become flooded
- More extreme weather conditions. For example: droughts meaning that crops cannot grow and wildfires in dry regions
- Extinction of many species due to changes to ecosystem. For example: coral reefs will become bleached due to ocean acidification and polar ice caps will melt leaving animals such as polar bears without anywhere to live

What has this got to do with waste?

Due to increased populations, there has also been a rise in the amount of waste we create. In the past we mainly used landfill to deal with our waste. This is a giant hole in the ground that is filled with waste and left to breakdown. However, many materials such as plastics can take a very long time to break down naturally. Landfill also produces **methane** (a greenhouse gas with a greater warming potential than CO₂) due to organic materials breaking down anaerobically (without oxygen).

Due to **increase costs** and the **environmental effects** of landfill, we needed to find alternative ways to deal with our rubbish. The waste hierarchy goes through the steps we need to take to tackle these issue:

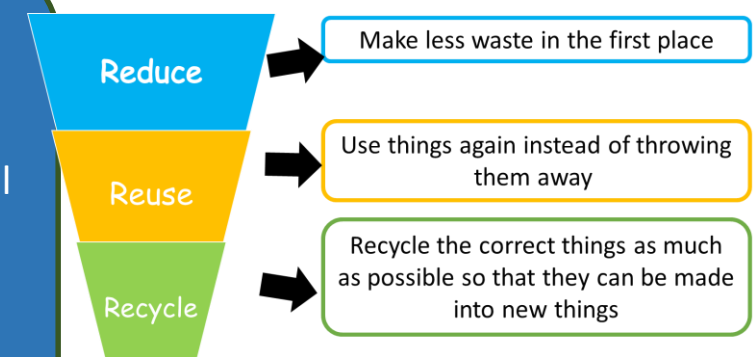


Fig2: The waste hierarchy

Recycling

Although we should try to reduce and reuse first, recycling allows us to take materials that would normally go to waste and turn them into new things, keeping the materials as useful as possible for as long as possible. It saves us energy and is much better than waiting for materials to breakdown naturally. Did you know that recycling 1 glass bottle can save enough energy to power a light bulb for 4 hours? By saving energy and reducing the amount of rubbish in landfill, recycling can help reduce the effects of climate change