Atmospheric pollution

Atmospheric pollution is when **chemical compounds** in the atmosphere, usually made by human activity, have a negative impact on us and our environment. Often, burning **fossil fuels** produce these **chemical compounds** and they add to **climate change**, **acid rain** and **smog**.

Acid rain

When coal is burned to produce electricity, it produces **sulfur dioxide** (SO_2). When **fossil fuels** are burned inside a car engine, the high temperatures and pressures can cause nitrogen and oxygen in the air to produce **nitrogen oxides** (NO and NO_2). **Sulfur dioxide** and **nitrogen oxides** dissolve in rainwater to make it more acidic than normal. This is called **acid rain**, which can damage vegetation and kill aquatic animals.

Smog

Sulfur dioxide and **nitrogen oxides** also add to **smog** which can cause breathing problems, especially for people with **asthma**.

Climate change

Burning **fossil fuels** produce large volumes of **carbon dioxide** (CO_2) which is the main gas that causes the **greenhouse effect** in our **atmosphere**. Other gases, such as **methane** (CH_4), also add to this effect. These gases trap heat energy close to Earth's surface, causing global temperatures to increase more than they should. This has caused a rise in sea levels, flooding and more extreme weather events across the world.

Did you know …?

- Wind and solar power are clean and **renewable methods** of generating electricity.
- You can help combat **atmospheric pollution** by turning off appliances and lights when you're not using them.
- In some cities, buses use **green hydrogen**, which is produced **renewably**. That means the buses don't produce carbon dioxide.
- You can help reduce the burning of **fossil fuels** by using trains and buses or cycling, instead of travelling by car or plane.
- It is possible to capture and store **carbon dioxide** once it has been produced, which stops the gas contributing to the **greenhouse effect**.