



Air pollution

Air pollution is caused by unwanted, and often harmful, gases in the air.

On pages 8 and 9 we saw how easy it is for a scent to travel. Unpleasant, and even harmful, gases can travel just as quickly. These gases produce **AIR POLLUTION**.

Polluting gases around us

Air pollution is caused by air becoming mixed with gases that are unpleasant, irritating or that can do us harm.

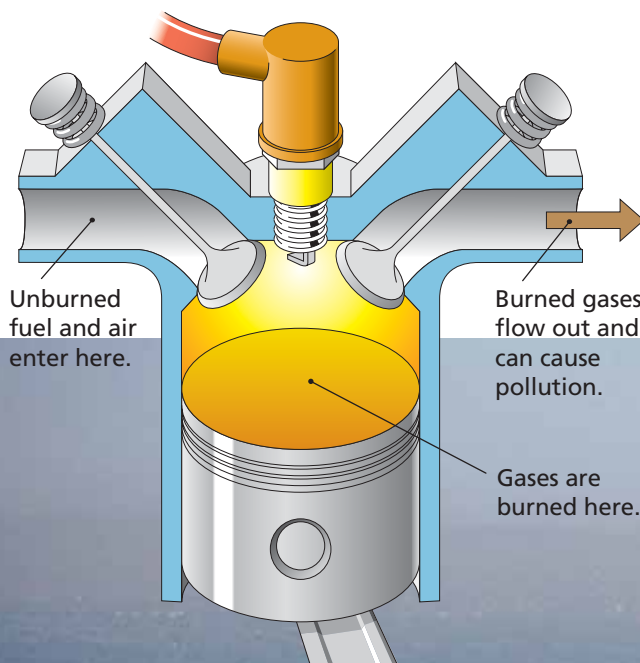
The main gases that pollute our air are released (along with carbon dioxide) when we burn coal, oil and natural gas. The major gases produced this way are called sulphur dioxide, nitrogen dioxide and ozone.

Power station gases

Coal, oil and gas all contain a substance called sulphur. When one of these fuels burns, the sulphur combines with the oxygen in the air to make a gas called sulphur dioxide.

Water droplets in clouds soak up the sulphur dioxide gas. When this happens, the water becomes acid. When it then falls as rain we call it **ACID RAIN**. When acid rain falls onto plants, or gets into the soil, plants are harmed and can even die. There are many forests in Europe and North America that have been killed by acid rain.

▼ (Picture 1) When fuel burns inside an engine, oxygen and nitrogen combine to form a reddish-brown gas called nitrogen dioxide.



Vehicle fumes

Engines work by sucking in a mixture of air and fuel, and then burning it (Picture 1). This produces a brown gas called nitrogen dioxide. This brown gas helps to cause the brown haze that hangs over cities on hot, still summer days (Picture 2).

At the same time, the fumes cause some oxygen in the air to change to a new gas called ozone (Picture 3). Ozone is a vital gas high in the sky (where it protects

us from dangerous rays in sunshine) but at street level it makes eyes hurt and throats sting. Cars fitted with a special type of exhaust, called a catalytic converter, prevent much of this pollution. This is why all new cars have these converters fitted.

Summary

- Air pollution is caused by unpleasant and harmful gases in the air.
- Sulphur gases cause acid rain.
- Nitrogen dioxide gas produces a brown haze in the air.

▼ (Picture 2) You can see the haze produced by nitrogen dioxide in the picture below.



◀ (Picture 3) This bus seems to be sending out just soot, but it is also rich in invisible ozone and nitrogen gases.

