



Oxygen and carbon dioxide

Two of the gases in the air are vital to all living things.

The air contains two gases that affect our day to day lives. They are oxygen and carbon dioxide.

Oxygen

Oxygen makes up one-fifth of all the gas in the air. Oxygen combines with many things.

When it does this quickly, the effect can be dramatic. This is what happens in a fire (Picture 1). When oxygen combines more slowly with metals it causes them to lose their shine.

In our bodies, oxygen combines with food to release the energy that sustains us (Picture 2).

When oxygen combines with food in our blood, a new gas is made, called carbon dioxide. We breathe in oxygen and breathe out carbon dioxide.

Carbon dioxide

Every leaf, stem and flower that you see has been made using carbon dioxide. Plants need carbon dioxide just like we need oxygen. As carbon dioxide is used by plants they release oxygen (Picture 2 on page 14).

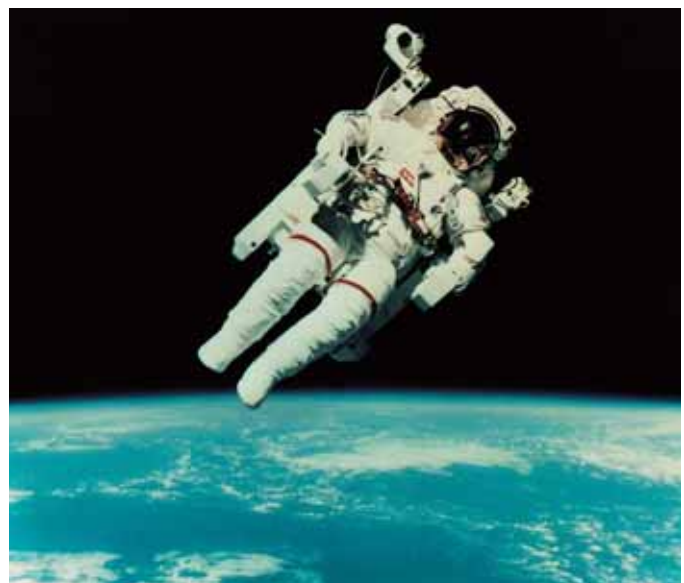
The oxygen cycle

There is a never-ending cycle that keeps the amounts of carbon dioxide and



▲ (Picture 1) Oxygen easily combines with many other substances, giving out heat. This is how our bodies stay warm, but if it happens very quickly, and if it starts at a very high temperature, then things catch fire!

▼ (Picture 2) Oxygen is vital to life on Earth. We need oxygen to breathe. There is no oxygen in space, so astronauts need to provide their own supply.



oxygen in the world balanced. Plants use carbon dioxide and produce oxygen as they grow. Animals use the oxygen to grow and give out carbon dioxide which the plants use (Picture 3). This is called the oxygen cycle.

Global warming

Unlike most other gases, carbon dioxide soaks up **HEAT**. The more carbon dioxide there is in the air, the warmer the air becomes.

Over millions of years, great forests have become buried and turned into coal,

while animal remains have been buried and turned into oil and natural gas. These burials locked up lots of carbon and so removed carbon dioxide from the cycle.

Burning coal, oil and natural gas releases carbon dioxide back into the air, allowing the air to soak up more heat. This warming of our air in recent times has been called **GLOBAL WARMING**. Scientists are now worried that this rapid change may alter the climate across the world.

Summary

- Oxygen combines with many substances, often releasing heat.
- Carbon dioxide is needed by plants.
- Oxygen and carbon dioxide are renewed in a continuous cycle.

▼ (Picture 3) The oxygen cycle.

