Composition of Air

Air is a mixture of a number of gases and some other particles such as:

1. Water Vapour

Air contains water vapour which helps maintain the water cycle. When air comes in contact with cold surfaces, it is these vapours that turn into or condense into droplets of water. The amount of water vapor in the air from place to place and time to time. At a normal 30°C for instance can contain say up to 4% of water vapour.

2. Oxygen

It is the oxygen in the air that helps humans and animals carry out the respiration process. Oxygen is also required for fire to keep burning. If we were to keep an inverted tumbler covering a burning candle, the candle will go off in a few seconds because of the lack of oxygen-containing air due to the tumbler. Dry air is said contain about 21% of oxygen.

3. Nitrogen

Dry air is said to contain about 78% of nitrogen. This component of air helps plants in their growth process.

4. Carbon dioxide

Carbon dioxide is a very small (only 0.04%) component of air and is a byproduct of respiration by humans and animals. Fire also uses up oxygen to burn and then produces carbon dioxide and a few other gases upon burning. This is why we feel suffocated if there is something burning inside a room. This happens due to an excess of carbon dioxide as the fire continues to burn in the room, choking out oxygen in the air.

Composition of Air

5. Dust and Smoke

Smoke is another component given out when fire burns. It is very harmful and adds fine dust particles and a few other gases to the air. This is why industries use long chimneys in order to release this smoke in the air. But as we know this act is what contributes to air pollution in the environment.

Air also contains very fine dust particles which can be seen when a beam of light enters a dark room. The tiny particles flying around in the beam are actually these dust particles. It is hence advised by our elders to breathe only through our nose and not our mouths so that the fine hair and mucus in the nose is able to filter out these dust particles so that we don't inhale them and harm ourselves.