

STATES OF MATTER (teacher's notes)

GASES

About gases:

Gases in general:

- Gas molecules are further apart and move even more freely than molecules in liquids. The gas molecules make contact with one another because as they don't stop moving they hit into each other.
- Some gases such as the yellowish-green chlorine are visible.
- Some gases smell, such as hydrogen sulphide, which smells of rotten eggs.
- Gases have no set shape or volume.

Air:

- You can find air everywhere: in water (if you leave a glass of water in a warm place for a few hours, you will see tiny bubbles full of air), objects, living beings (humans, animals and plants).
- Air is light, invisible and odourless.
- Air is about 78 % nitrogen, about 21 % oxygen, less than 1 % carbon dioxide and other gases.
- Water vapour is an invisible gas.

Hot air balloons:

- A burner heats the air inside hot air balloons and hot air rises because it is lighter than the air outside.

Activity 8: After observing, touching, imagining, drawing, measuring... the whole class is ready to define what a gas is.

- Molecules in gases are very widely spaced and for this reason gases can fit into different shapes and they always fill the space where they are.
- Gases can flow.
- Gases, unlike solids and liquids, will not stay where they are put.
- Gases can be compressed.