

## Gases Around Us (Chemistry)

Year 5, Spring Term

<b><i>You will be taught</i></b>	<b><i>You should know</i></b>
to recognise differences between solids and liquids	that solids retain their own shape, liquids flow and take the shape of the container they are in;
that air has weight and is all around us	that kites and flags flying, parachutes slowing down, washing drying and pumping up inflatable objects all help to show that air is real
that powders and sponges are solid materials with air in the 'gaps' in between particles	that air spaces in powders and sponges get filled with water and that bubbles of air will appear when water is fills these gaps
that observations and measurements may need to be repeated	why it is helpful to repeat observations
that soils have air trapped within them to measure volumes of water carefully to use their results to compare the air trapped in different soils	how to use measuring cylinders to make measurements of volume; that bubbles appear because the water pushes the air (gas) out of the spaces between the particles of soil
that there are many gases and many of these are important to us	the names of several gases (oxygen, carbon dioxide, nitrogen, hydrogen, helium) and identify one way in which each is useful to us
that gases are formed when liquids evaporate to explain 'disappearance' of water in a range of situations as evaporation	that evaporation is when a liquid changes to a gas; that water evaporates when left in an open dish, when washing dries, and when puddles dry up
that other liquids evaporate and form gases which flow easily from place to place	that we smell things when gases enter our noses and that we smell many liquids, eg paint, because gases from the liquid travel through the air to our noses when some of the liquid evaporates; that natural gas can cause explosions, and if we can smell it we can detect leaks
that gases are different from solids and liquids in terms of how they do not maintain their shape and volume; that gases flow more easily than liquids and in all directions	that gases are more easily squashed than solids or liquids; gases escape from containers and flow everywhere; when liquids spill they just run along the floor.

<http://www.bbc.co.uk/schools/ks2bitesize/science/activities/gases.shtml>