
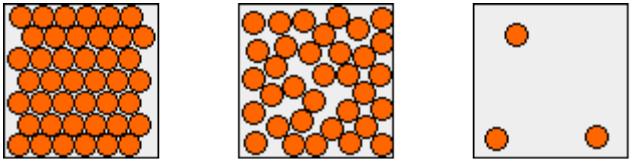

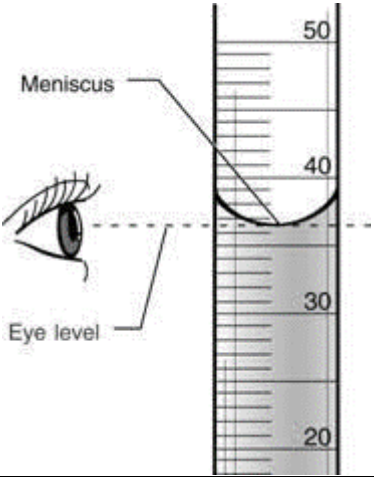

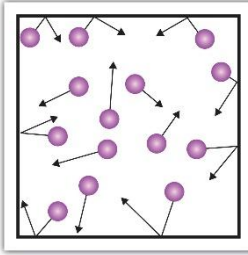


5b Solids, Liquids and Gases Year 9

Key word	Simple meaning	GCSE definition	Words in a sentence	Translation
(Surface) Area	Total area of all sides measured in meters <sup>2</sup>	Area of a surface measured in m <sup>2</sup> .	<p>The <b>surface area</b> of a high heeled shoe is smaller than the <b>surface area</b> of a flat shoe.</p> 	
(electronic mass) Balance	Equipment that measures mass	Equipment that measures mass.	<p>Use a <b>mass balance</b> to measure <b>mass</b> in kg.</p> <p>The pupil zeroed the <b>mass balance</b> before placing the object on the.</p>	
Density	How much mass in a volume. E.g. air has a low density and metal has a high density.	<p><b>Mass per unit volume.</b></p> $\rho = \frac{m}{V}$	<p>If the particles are more spread out, the material has a lower <b>density</b>.</p> <p>Solids and liquids have similar <b>density</b>.</p>  <p style="text-align: center;">solid                      liquid                      gas</p>	
Fluid	A material that flows, e.g. water.	A substance that flows ; liquid or gas e.g. water, air	<p>The pressure in a <b>fluid</b> acts equally in all directions.</p> <p>Oil is a <b>fluid</b> used in braking systems.</p>	

Force	Push or pull	A push or pull that causes a change in momentum.	The gravitational <b>force</b> has a downwards direction, towards the centre of the Earth.  <small>An apple falling down the tree to the surface of the ground</small>
Gas	A state of matter e.g. steam, air	A state of matter where particles are far apart from each other.	When the water in the kettle was <b>boiling</b> , the water was changing from a <b>liquid</b> into a <b>gas</b> .
Liquid	A state of matter e.g. water, oil	A state of matter where the particles are touching, rolling over each other and vibrating.	When the ice cubes were taken out of the freezer the ice changed from a <b>solid</b> to a <b>liquid</b> .
Mass	Amount of matter measured in kilograms.	Amount of matter measured in kilograms.	If a person has a <b>mass</b> of 60kg, they have a <b>weight</b> of 600N. <u>Note:</u> In English people use mass and weight as if they are the same, in Physics they have very different meanings.
Measuring cylinder	Equipment that measures volume	Equipment that measures <b>volume</b> of a <b>liquid</b> . You must measure the <b>volume</b> with your <b>eye level</b> with the bottom of the <b>meniscus</b> . 	The pupil should place the <b>measuring cylinder</b> on a level bench before adding the liquid. 
Particles	Atoms or molecules	A particle refers to an atom or molecule that makes up a solid, liquid or gas.	The particles all had speeds in different directions. The particles move randomly.

				
Pressure	Push on a surface.	Pressure is the force per unit area. $P = \frac{F}{A}$	When the gas was heated, the <b>particles</b> were moving faster and applied a bigger <b>force</b> on the <b>area</b> , so the <b>pressure</b> increased. The pressure at a point in a <b>fluid</b> (in other words, a gas or liquid) at rest acts equally in all directions	
Solid	A state of matter e.g. ice, metal	A state of matter where the particles are touching, in a uniform lattice and vibrating.	Ice is an example of a <b>solid</b> , when it <b>melts</b> into water it becomes a <b>liquid</b> .	
Volume	Space of a 3D object.	Space taken up by a 3D object measured in m <sup>3</sup> .	To find the volume of a regular shape, you multiply width by height by depth.	
			