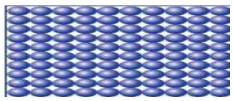
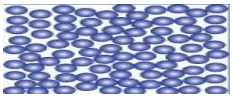
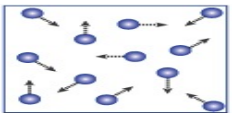
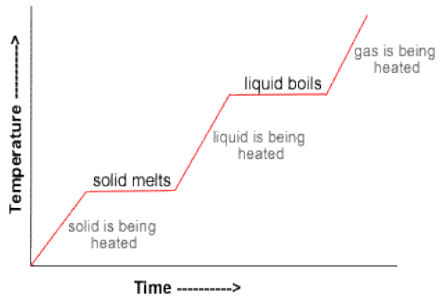
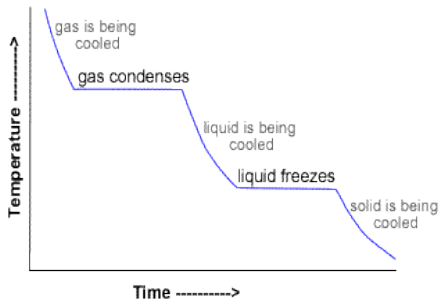
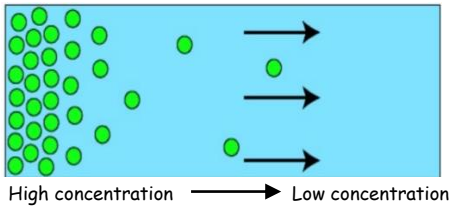
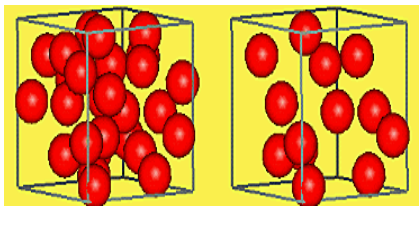
P

Particle Model

Y7

Rationale

The particle model helps us to predict the behaviour of solids, liquids and gases and this has many applications in everyday life. It helps us to explain a wide range of observations and engineers use these principles when designing vessels to withstand high pressures and temperatures, such as submarines and spacecraft. It also explains why it is difficult to make a good cup of tea high up a mountain!

Diagrams	Keywords	Definitions
	Solid	Particles are regularly arranged, have low energy and vibrate around a fixed point.
	Liquid	Particles are free to flow past each other and have a medium amount of energy.
	Gas	Particles move randomly in all directions with lots of energy, colliding with one another.
	Melting	When a solid turns into a liquid.
	Evaporation	When a liquid turns into a gas.
	Condensation	When a gas turns into a liquid.
	Freezing	When a liquid turns into a solid.
	Diffusion	When particles spread out from an area of high concentration to an area of low concentration.
	Density	The amount of mass of a substance per unit of volume. Calculated as mass ÷ volume. Examples of units *could be* g/cm^3 or kg/m^3.

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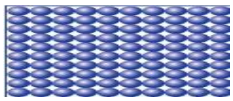
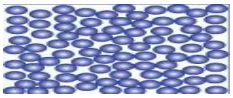
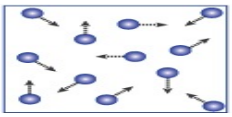
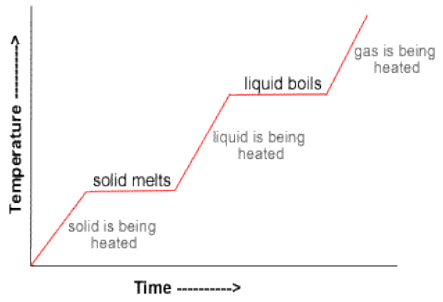
	Solid	Particles are regularly arranged, have low energy and vibrate around a fixed point.
	Liquid	Particles are free to flow past each other and have a medium amount of energy.
	Gas	Particles move randomly in all directions with lots of energy, colliding with one another.
	Melting	When a solid turns into a liquid.
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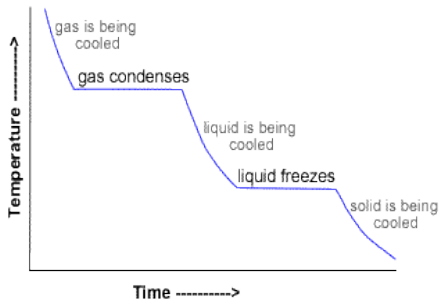	Condensation	When a gas turns into a liquid.
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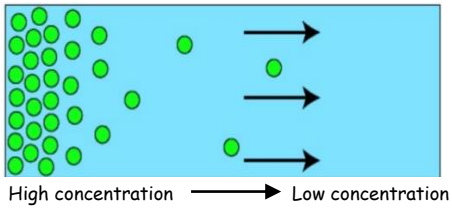
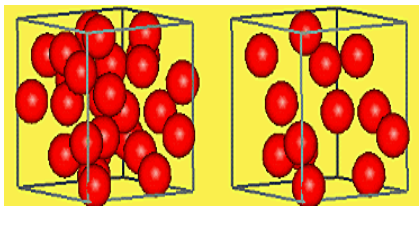
	Diffusion	When particles spread out from an area of high concentration to an area of low concentration.
	Density	The amount of mass of a substance per unit of volume. Calculated as mass ÷ volume. Examples of units *could be* g/cm^3 or kg/m^3.