Definitions and Concepts for CAIE Chemistry IGCSE

Topic 1 - The Particulate Nature of Matter

Definitions in **bold** are for extended supplement only

Definitions have been taken, or modified from the [CAIE Specification for GCSE Chemistry, 0971, Version 1 September 2020](https://bit.ly/pmt-edu-cc)

**Brownian motion:** The random motion of particles suspended in a fluid. The movement occurs since the particles collide with other moving particles in the fluid.

**Diffusion:** The net movement of particles from an area of high concentration to an area of low concentration. Diffusion can only occur in fluids.

**Gas:** The state of matter where the particles have the most energy. The particles in a gas are relatively spread out and move randomly in all directions.

**Kinetic theory:** The theory which models the three states of matter by representing the particles as small solid spheres. Kinetic theory can help to explain melting, boiling, freezing, condensing and sublimation.

**Liquid:** The state of matter where the particles are arranged randomly and close together. The particles are able to move past each other.

**Solid:** The state of matter where the particles hold a regular arrangement and have the least amount of energy. The particles vibrate in fixed positions.

**Sublimation:** The process of a solid turning straight into a gas, without first becoming a liquid.