Particle model

The big picture

Matter is what everything in the world is made of.

Matter exists in one of three states: solids, liquid and gases. Substances can change from one state of matter to another.

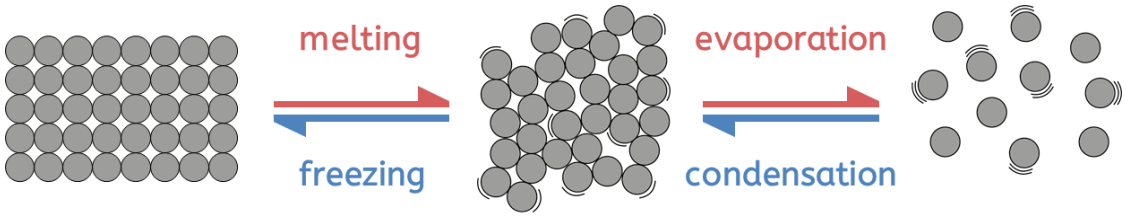
All matter is made up of tiny parts called particles.

Changing states

In a **solid**, the particles are close together and are unable to move away from their neighbors.

In a **liquid**, the particles are close, but they can slide past each other.

In a **gas**, the particles are far apart and can move freely.



- Solids have a fixed shape; they cannot flow. Solids cannot be compressed.
- Liquids can flow and take the shape of the bottom of the container they are in. They cannot be compressed.
- Gases can flow and fill the container that they are in. They can be compressed.

Key vocabulary

- **condensation** (noun): the process in which a substance changes from a gas to a liquid
- **evaporation** (noun): the process in which a substance changes from a liquid to a gas
- **freezing** (noun): when a liquid turns into a gas
- **melting** (noun): a process by which solids turn into liquids
- **particle** (noun): the smallest parts of matter
- **precipitation** (noun): water falling to the Earth's surface as rain, snow, sleet or hail
- **temperature** (noun): a measure of how hot or cold something is

The water cycle