

## Vocabulary

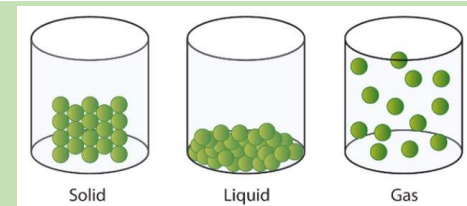
<b>1 matter</b>	anything that takes up space and has a mass	<b>7 thermal</b>	anything related to heat
<b>2 particles</b>	very tiny pieces of matter	<b>8 insulator</b>	a material or an object that does not easily allow heat, electricity, light or sound to pass through it
<b>3 a state (or phase) of matter</b>	the form in which matter exists e.g. as a solid, liquid or gas	<b>9 conductor</b>	the ability of a material to transfer heat (allow heat to travel through it)
<b>4 solid</b>	a substance that keeps its own shape when put into a container	<b>10 sieving</b>	separating dry materials using a piece of equipment containing tiny holes
<b>5 liquid</b>	a substance that fills a container from the bottom	<b>11 filtration</b>	a method of separating a solid from a liquid
<b>6 gas</b>	a substance that completely fills a container	<b>12 evaporation</b>	separating a dissolved solid from a liquid by heating the solution

## Key knowledge

In a solid, particles can only vibrate around a fixed point.

In a liquid, particles can move around and over each other, allowing liquids to flow and be poured.

In a gas, particles are spaced out and free to move in any direction. They move quickly in straight lines, colliding with each other and the walls of their container.



Melting and dissolving are **different** processes

In **melting**, only one substance is involved and the liquid and solid are the same material. Heat is needed for melting to occur. For example, a snowman melting in the sun or butter melting when you are cooking.

**Dissolving** involves two materials; the two materials together form a mixture called a solution. The dissolved substance is still present in the solution even though it can't be seen. For example, salt in sea water or sugar in a cup of tea.

A **reversible change** is a change that can be undone (ice can be melted back into water). An irreversible change cannot be undone (a cooked egg cannot be changed back to a raw egg again).