

What did we learn before: Year 3 Term 1 - Magnets and their properties.

Key knowledge by subject

SCIENCE

States of Matter

Materials are classified as solids, liquids and gases.

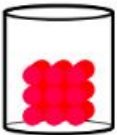
Solids have a fixed shape and cannot spread out.

Liquids can flow and take the shape of the container they are in.

Gases have no fixed shape, spread out and are often invisible.

The three states of matter and their basic properties

SOLID



- rigid
- fixed shape
- fixed volume

cannot be squashed

LIQUID



- not rigid
- no fixed shape
- fixed volume

cannot be squashed

GAS



- not rigid
- no fixed shape
- no fixed volume

can be squashed

Changes of state and processes

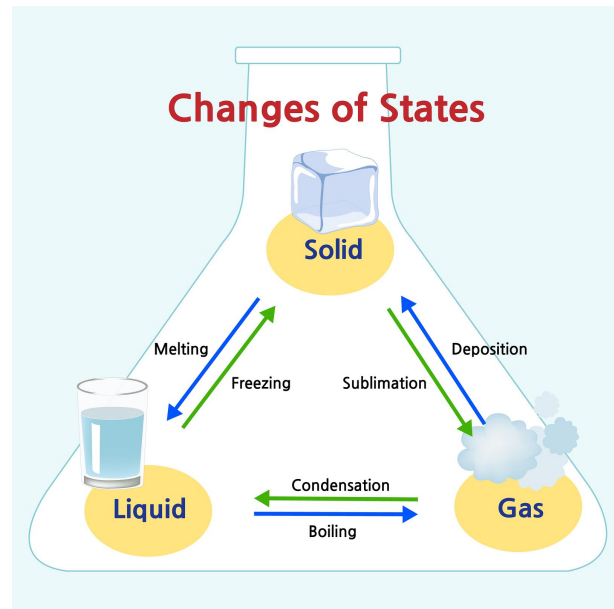
‘**Changing state**’ is when a material’s classification is changed.

Heating and cooling are examples of how to change the state of a material.

Some changes are **reversible** and others are **irreversible**.

Changes can form new materials.

Mixtures of materials can be separated through processes such as **dissolving** and **evaporation**.



Key vocabulary

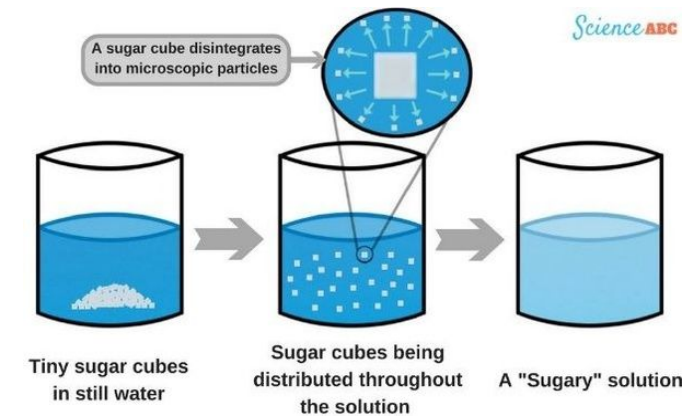
Material	Any substance which has a name is a material.
Solid	A material which has a fixed shape and cannot move
Liquid	A material which can flow and take the shape of its container.
Gas	A gas has no fixed shape, spreads out and is often invisible.
Mixture	When two or more substances are mixed together but not permanently chemically joined.
Changing State	When a material moves between being a solid, liquid or gas to a different state.
Reversible	A reversible change can be undone and is not permanent.
Irreversible	An irreversible change cannot be undone; it is permanent.

Key knowledge (continued)

SCIENCE

A substance can be **soluble** or **insoluble**.

When a solid dissolves in a liquid it becomes a solution.



SCIENCE/PHSCE

Recycling

Recycling is a process which is good for the environment.

The process of recycling can be **reversible** or **irreversible**.

In order to help the environment, we can:

- **Reduce** the amount waste you produce.
- **Reuse** the materials which you use.
- **Recycle** materials so they can be used again.

Reduce	Reuse	Recycle
 Plastic containers	 Clothing	 Cardboard
 Bags	 Reuseable bags	 Soda cans

Examples of 'reduce, reuse, recycle' works

Key vocabulary

Soluble	When a substance dissolves and 'disappears' in water.
Insoluble	When a substance does not dissolve or 'disappear' in water.
Dissolving	When a substance 'disappears' into a liquid.
Evaporating	When liquid turns into a vapour.
Melting	The process of a solid becoming a liquid due to heat.
Freezing	When a liquid turns into a solid due to cold temperature.
Condensation	When a gas turns into water.
Reduce	Using a smaller amount of a material.
Reuse	Using a material again to reduce waste.
Recycle	Converting waste into a reusable material.