

Year: 5

Term: Spring 1

Topic: Chemistry: - Properties and Changes of Materials

St Dennis Primary Academy

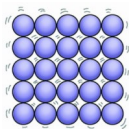
"Everyone matters, everyone succeeds, every moment counts"



States of Matter

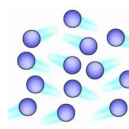
Solids

- Stay in one place
- Keep their shape
- Do not flow
- Always take up the same amount of space
- Do not spread out
- Can be cut or shaped



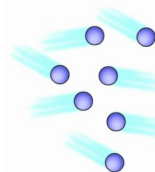
Liquids

- Can flow or be poured
- Not easy to hold
- Change their shape to fit the container they are in
- Take up the same amount of space
- Volume stays the same

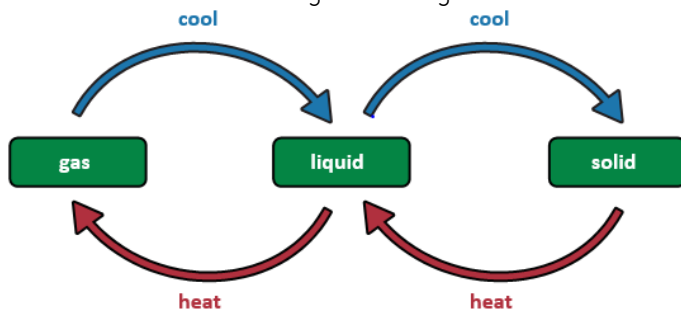


Gases

- Often invisible
- Do not keep shape
- Do not take up the same amount of space
- Can change shape and volume
- Can be squashed



States of matter can change when they are heated or cooled.



Solution

A **solution** is when a material dissolves in a liquid. Sugar and water are **soluble** materials. An **insoluble** material does not dissolve in a liquid, such as sand. Materials in a solution can be separated by **evaporation**.



Reversible changes

Reversible changes are when you can get the original materials back.



Irreversible changes

Irreversible changes are when you cannot get the original materials back again. Heating and chemical reactions can both cause irreversible changes.



Separating materials

evaporation - used for separating a soluble solid and a liquid



sieving - used for separating two solids



magnets - used for separating magnetic and non-magnetic materials



filtration - used for separating a liquid and a solid



Glossary

- boiling** The process by which molecules of a liquid change to vapour (much faster change than evaporation).
- chemical change** One where the molecular structures of the combined substances are broken down and recombined to make a new substance.
- condensing** The change of vapour into a liquid.
- conductor** Allows electricity to flow through it.
- evaporation** Change from a liquid to a vapour freezing - the change of a liquid to a solid.
- filtration** The collection of larger particles in a mixture.
- insoluble** A substance that will not dissolve in water.
- irreversible change** A physical change that we cannot undo.
- melting point** The point at which a solid substance liquefies.
- physical change** Where the molecular structures of the combined substance stay separate, allowing separation to occur.
- reversible change** A physical change that we can undo.
- saturation** The point at which no more solute can be dissolved.
- soluble** A substance that will dissolve in water.
- solution** A soluble solid is dissolved in liquid to form a solution.
- transparent** Can see through it.