

**structure of material**

everything made from **atoms** and **molecules**

atom = smallest known part of any material

molecule = two or more atoms, bonded

particles = atoms + molecules

**gas**

air-like

can flow

no fixed shape

particles **moving apart** quickly**liquid**

can flow

take shape of the container

particles **very close** but **not fixed****solid**

own shape

can't flow

fixed volume

particles **very close** and fixed position**uses and properties of materials****conductor**material that **allows** heat or electricity through**insulator**material that **does not** allow heat, electricity or sound through very well**hardness**how easily a material can be **scratched****solubility**how well a substance **mixes** into a liquid**transparency**

how see-through a material is

**transparent****translucent****opaque****magnetism**when a material is attracted by **magnetic** force**physical change**generally **reversible**2 or more materials **combined****dissolving** **melting** **freezing** **evaporating****solid****liquid****gas****chemical changes****irreversible**

cannot change back

heating

frying an egg

**mixing certain materials**

vinegar and bicarbonate of soda

**burning**

ash and smoke

**dissolving****solute**

+

solvent

=

solution

a substance put into a liquid

the liquid that a solute is put into

mixture formed when a solute dissolves in a solvent

**salt**

+

water

=

saltwater**separating****sieving****mixture**made of **solid particles**

sand from pebbles

filtering

separate mixtures

filter paper

sand from water

magnetism

separate magnetic material

iron from plastic

iron from plastic

evaporating

separate solutions

heatingsalt from water
salt left behind