

Properties

Materials can be natural or synthetic. The property of a material describes what it looks like and what it does.

They include:

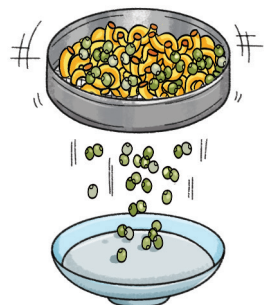
- hardness
- magnetism
- transparency
- solubility
- conductivity.

Magnetism

Magnets produce a magnetic field. Iron and steel are magnetic materials. If a magnetic material is placed in a magnetic field, it will be attracted to the magnet.

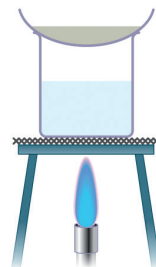
Separating mixtures

A mixture consists of two or more materials that are not joined together. They can be separated by:



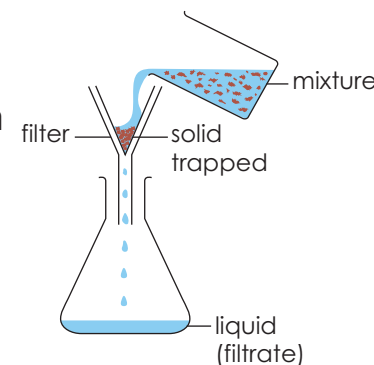
Sieving

Separates a mixture of solids.



Evaporation

Separates a solute and a solvent in a solution.



Filtration

Separates insoluble solids from liquids.

Conductivity

- Conductors allow electricity and heat to pass through.
- Insulators don't allow electricity and heat to pass through easily.

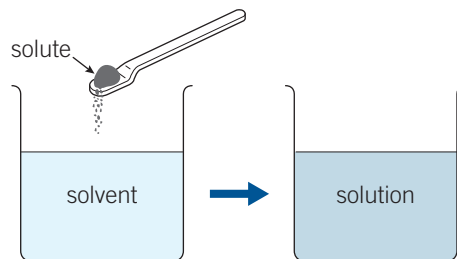
Solubility

If a solid dissolves in a liquid, it is soluble.
If a solid does not dissolve in a liquid it is insoluble.
Salt is soluble in water. It dissolves to form a solution.

Dissolving

Can be sped up by:

- high temperature
- stirring.



Reversible and irreversible changes

Reversible change	Irreversible change
All original materials can be recovered	Original materials cannot be recovered after the change has happened

Irreversible changes produce new materials. Signs that an irreversible change is happening include:

- light being given off (emitted)
- a temperature change
- a colour change
- a gas is given off.

Word	Definition
conductor	A material that electricity or heat passes easily through.
dissolve	The process of mixing a solute in a solvent to form a solution.
evaporation	The process of separating a soluble solid from a liquid.
filtration	The process of separating an insoluble solid from a liquid.
insoluble	A material that cannot dissolve in a solvent.
insulator	A material that electricity or heat does not pass easily through.
irreversible	Cannot be changed back.
magnetic	A material that is attracted to a magnet, such as iron and steel.
magnetic field	A region where there is a force on a magnet or magnetic material.
material	The material from which things are made.
metal	Particular materials that are good conductors of electricity and heat.
mixture	Two or more materials that are not joined together.
property	What a material looks like and what it does.
reversible	Can be changed back.
separate	The process of splitting the parts of a mixture.
sieving	The process of separating a mixture of two solids, each with different sized pieces.
soluble	Whether a material dissolves in a liquid.
solute	A material which is being dissolved.
solution	Solute plus solvent; a mixture in which one or more solutes are dissolved.
solvent	The material in which the solute is dissolved.
synthetic	Materials made from other materials by humans.