



Year 5 – Properties and changes of materials

Some insulating materials found in our houses include fibre glass loft insulation, cavity wall filler and double-glazed windows.

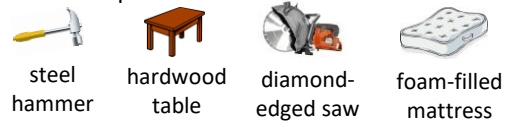
ROCKET WORDS – learn these words and their definitions

Key Word	Definition
dissolve	When a solid is mixed with a liquid and the solid particles can't be seen.
soluble	Able to dissolve
insoluble	Unable to dissolve in a given liquid
solution	A mixture of a liquid and a dissolved solid
conductor	A materials that heat or electricity can pass through easily
insulator	A material that does not let heat or electricity pass through them
reversible	Able to turn or change back
irreversible	Impossible to change back
filter	Passing a solution through a mesh (e.g. filter paper) to remove an insoluble solid from a liquid

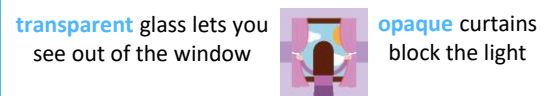
Magnets are used in many everyday appliances: televisions, printers, stereos, earphones and computers

Properties of materials and their uses

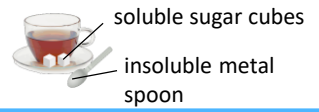
Hardness - how resistant a material is to scratching and pressure



Transparency - how well light passes through a material



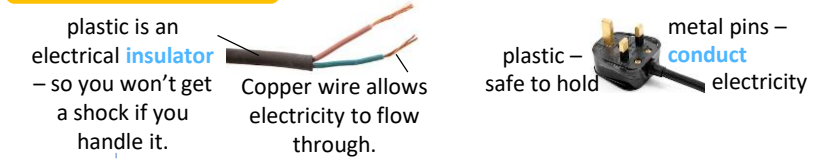
Solubility - how well a material dissolves



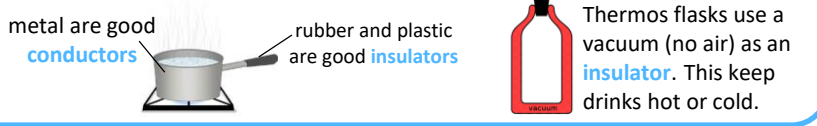
Magnetism - whether a material is attracted to a magnet
Iron, nickel and cobalt are magnetic. **Steel** is magnetic because it contains iron.



Electrical conductivity - whether electricity can flow through them
plastic is an electrical **insulator** - so you won't get a shock if you handle it.
Copper wire allows electricity to flow through.
metal pins - **conduct** electricity
plastic - safe to hold

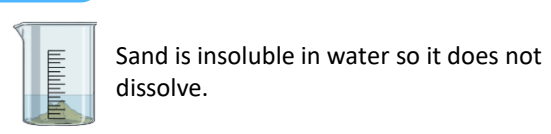
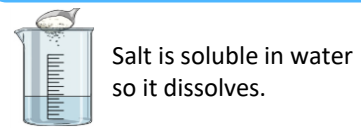


Thermal conductivity - how well heat passes through an material
metal are good **conductors**
rubber and plastic are good **insulators**
Thermos flasks use a vacuum (no air) as an **insulator**. This keep drinks hot or cold.



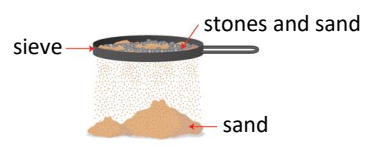
Solutions and separating mixtures

Dissolving a solid in a liquid makes an solution.

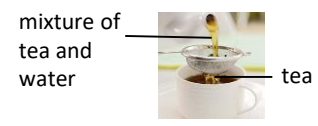


A mixture can be separated based on the properties of the materials its made up of.

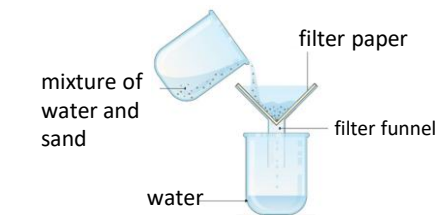
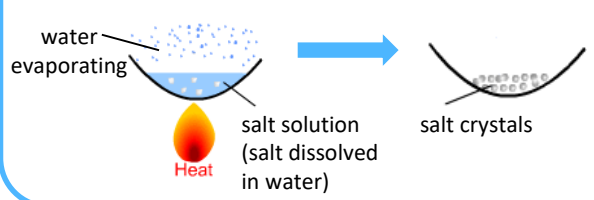
Sieving - separating solids of different sizes



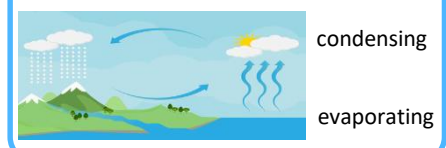
Filtering - separating insoluble solids from a liquid



Evaporation - separating soluble solids from a liquid



Reversible changes



Irreversible changes

In an irreversible change, new materials are formed.

