St. Paul's C of E VA Primary and Nursery School
Knowledge Organisers

Year Group: Year 5

Topic: Materials

Vocabulary Dozen	
chemistry	the scientific study of the structure of substances.
physics	the scientific study of forces and energy
specimen	an example of an animal, plant or object that scientists can study
substance	a solid, powder, liquid or gas
solubility	the ability of a substance to dissolve
soluble	will dissolve in liquid
insoluble	will not dissolve in liquid
transparent	a material that allows light to pass through.
hardness	a measure of how hard of soft a material is
thermal conductor	a material that allows heat to travel through it easily
electrical conductor	a material that allows electricity to flow through it
solidify	to change from being a liquid into a solid form

Separating Solids and Liquids	
filtering	separates an insoluble solid from a liquid.
sieving	separates solids of different sizes.
evaporation	separating dissolved substances from liquids.

Reversible and Irreversible Changes	
reversible change	Changes that are not permanent. Dissolving, mixing, melting, freezing are reversible changes. e.g. water turning to ice or steam
irreversible change	Changes that are permanent and cannot be undone. Result in the making of a new material. e.g. burning wood, baking a cake

Solubility	
dissolve	when a solid material mixes with a liquid and is no longer visible (it can no longer be seen)
solution	a liquid in which a solid has been mixed into and dissolved e.g. sugar and water, salt and water
saturation point	the limit to how much solid can be dissolved in a liquid. The point where the solid will be visible.

Magnets

A magnet is a piece of iron or other material which attracts some metals towards it

attract	one object pulling another object towards it
repel	one object pushing another object away from it

Magnetic Materials	Non-Magnetic Materials
Iron Steel Nickel	Aluminium Copper Gold Silver

How magnets work

Magnets have a North and South pole. North is often Red while South is often Blue. Arrows show the direction of the force in this diagram.

