


# Year 5 Science Knowledge Organiser – What things are made of.

## Materials. Summer 1

Key Vocabulary	Definition
Properties	The properties of matter in which you can observe and measure such as the objects density, colour, mass, volume, length, melting point, odour, temperature.
Solution	Where one substance is dissolved in another.
Acid	Any substance that in water solution tastes sour, changes the colour of certain indicators reacts with some metals, and promotes certain chemical reactions.
Separate	A Method that converts a mixture or solution into two or more distinct products.
Dissolve	When a substance in water dissolves it looks like it disappears but it doesn't it makes a transparent liquid called a solution.
substance	A substance is matter which has specific composition and specific properties. Every pure compound is substance. Example Iron.
Material	The substance that something is made out of e.g wood, plastic, metal
Transparent	A transparent object means it lets light through and it is clear like a glass jar or window.
Oxidisation	Occurs when you add oxygen and a loss of electrons occurs. Changes the properties. E.g when a nail goes rusty

**Dissolving**  
A solution is made when **solid** particles are mixed with **liquid** particles. **Materials** that will dissolve are known as soluble. **Materials** that won't dissolve are known as insoluble. A suspension is when the particles don't dissolve.

Sugar is a soluble **material**.



Sand is an insoluble **material**.



### Changes of State



The **solid melts**.

The **liquid freezes**.






The **gas condenses**.

The **liquid evaporates**.



### Key Knowledge

Reversible changes, such as mixing and dissolving **solids** and **liquids** together, can be reversed by:

Sieving	Filtering	Evaporating
		
Smaller <b>materials</b> are able to fall through the holes in the sieve, separating them from larger particles.	The <b>solid</b> particles will get caught in the filter paper but the <b>liquid</b> will be able to get through.	The <b>liquid</b> changes into a <b>gas</b> , leaving the <b>solid</b> particles behind.



Irreversible changes often result in a new product being made from the old **materials** (reactants). For example, burning wood produces ash. Mixing vinegar and milk produces casein plastic.



### Key Knowledge

Different **materials** are used for particular jobs based on their properties: electrical **conductivity**, flexibility, hardness, **insulators**, magnetism, solubility, thermal **conductivity**, **transparency**.