



GILES BROOK SCHOOL

- Know that some materials will dissolve in liquid to form a solution
- Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including filtering, sieving and evaporating
- Give reasons for the particular uses of everyday materials
- Demonstrate that dissolving, mixing and changes of state are reversible changes
- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity, and response to magnets
- Explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda

Useful web links

<https://www.bbc.co.uk/bitesize/topics/zryycdm>

<https://www.theschoolrun.com/homework-help/materials>

Knowledge Organiser

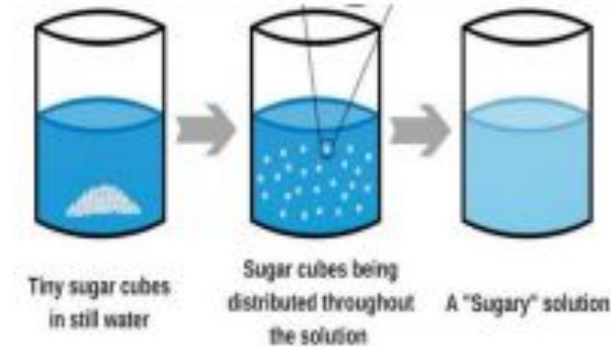
SCIENCE - PROPERTIES OF MATERIALS

I already know:

- Year 1 - Everyday Materials (naming, physical properties, grouping)
- Year 2 - Uses of Everyday Materials (identify and compare suitability of materials based on properties, investigate how solids can change shape)
- Year 3 - Rocks (compare and group rock types; fossils; soil formation)
- Year 4 - States of Matter (solids, liquids, gases; heating/cooling; water cycle)
- Year 4 - Electricity (simple circuit, conductors/insulators, switches)

DISSOLVING

Sometimes when a solid (solute) is mixed with a liquid (solvent) it will dissolve to form a solution e.g. dissolving sugar in hot tea.



REVERSIBLE AND IRREVERSIBLE CHANGES

REVERSIBLE	IRREVERSIBLE
Dissolving sugar in water	Toasting bread
Freezing water	Cooking a cake
Melting chocolate	A candle melting

Key Vocabulary

Material	the matter from which a thing is or can be made.
Reversible change	when materials can be changed back to how they were before the reaction took place
Irreversible change	when something cannot be changed back to its original form.
Dissolve	to become incorporated into a liquid so as to form a solution.
Evaporate	turn from liquid into gas/vapour
Filter	removing solid particles from a liquid or gas passed through it.
Solution	a mixture of two or more substances
Hardness	the quality or condition of being hard.
Solubility	the ability to be dissolved, especially in water.
Transparency	allowing light to pass through so that objects behind can be clearly seen
Conductivity	the degree to which a specified material conducts electricity or heat