

### PRIOR LEARNING:

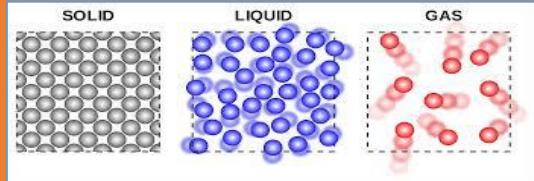
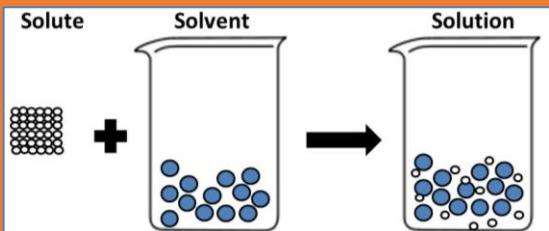
- Year 1: Material Properties
- Year 2: Materials
- Year 3: Forces and Magnets
- Year 4: States of Matter

### KEY LEARNING

- Materials have different uses depending on their properties and state (liquid, solid, gas).
- Properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets.
- Some materials will dissolve in a liquid and form a solution while others are insoluble and form sediment.
- Mixtures can be separated by filtering, sieving and evaporation.
- Some changes to materials such as dissolving, mixing and changes of state are reversible, but some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new materials and these are not reversible

### WORKING SCIENTIFICALLY

- Compare a variety of materials and measure their effectiveness (e.g. hardness, strength, flexibility, transparency, thermal conductivity, electrical conductivity).
- Observing changes of materials as a result of subjecting them to heat.
- Categorising changes as reversible or irreversible.
- Conducting investigations to assess how different factors affect the rate of change to materials.
- Carry out tests to answer questions regarding solubility such as 'How much of a solute can dissolve in different solvents' etc.



Vocabulary	Definition
<b>Transparent</b>	Allows light to pass through it.
<b>Translucent</b>	Allows only some light to pass through it.
<b>Opaque</b>	Does not allow light to pass through it.
<b>Hardness</b>	A measure of how resistant a solid is to a change of shape or indentation when a force is applied.
<b>Magnetism</b>	An object that relates to the force of magnetism (attracted to a magnet).
<b>Reversible</b>	A process that can be changed back to the previous state.
<b>Irreversible</b>	Not able to be changed back, so that the previous state or situation is restored.
<b>Soluble</b>	When a substance is able to be dissolved (especially in water).
<b>Solvent</b>	A substance (usually a liquid) capable of dissolving a solute to form a solution.
<b>Solution</b>	A mixture of a solute and a solvent.
<b>Evaporate</b>	The process of turning from a liquid into a gas.
<b>Condensation</b>	The process of turning from a gas into a liquid.

	condensation		sieve		filter
	dissolve		separate		reversible
	irreversible		soluble		insoluble