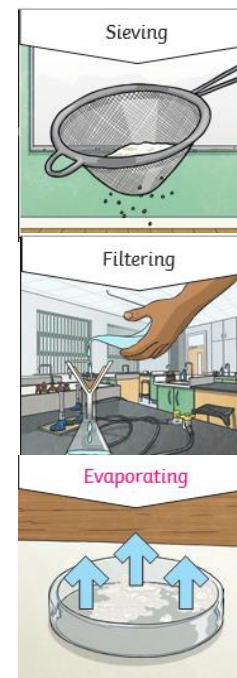


Key vocabulary

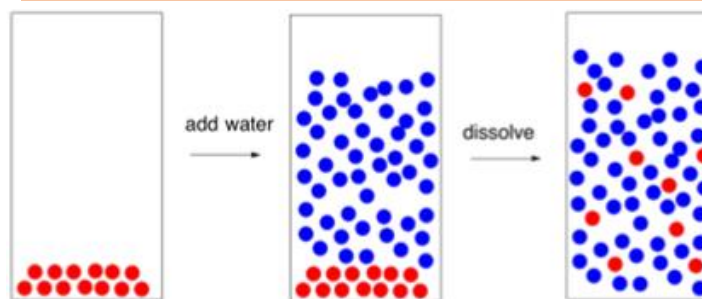
thermal	relating to heat
conductivity	how well a material allows electricity or heat to flow through it
dissolve	to become part of a liquid
solute	something that is dissolved in a solvent
solvent	a liquid that a solute can dissolve in
solution	what is made when a solute dissolves in a solvent
soluble	something that can be dissolved
insoluble	something that cannot be dissolved
filtering	allows solids and liquids to be separated
sieving	allows solids made of different sizes to be separated
reversible	a change that can be undone or reversed
irreversible	a change that cannot be undone or reversed
crystallization	the process by which a solid is formed

Key knowledge

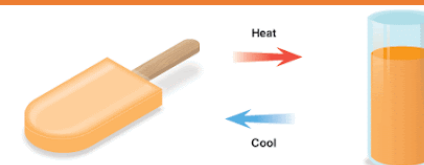
- Materials can be sorted based on their properties and state (liquid, solid, gas).
- The properties of a material make it suitable for different purposes.
- Properties include hardness, transparency, electrical and **thermal conductivity** and attraction to magnets.
- Some materials **dissolve** in a liquid and are called a **solute**, the liquid is called a **solvent** and the result is called a **solution**.
- A material is called a **soluble** when it dissolves in a solvent (e.g. sugar in water); or **insoluble** if it does not (e.g. sand in water).
- Mixtures can be separated by **filtering**, **sieving** and evaporation.
- When a solvent is evaporated from a solution, the original solute is left behind (e.g. water and salt).
- Some changes to materials such as dissolving, mixing and changes of state are **reversible**.
- Some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new materials and these are **irreversible**.



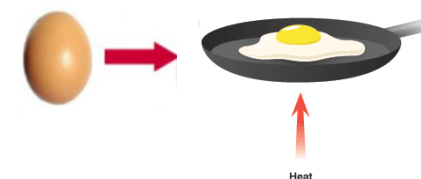
Sugar particles dissolving in water.



Reversible Change



Irreversible Change



We are building our
knowledge from
States of Matter (Year 4)