

Properties and changes of materials

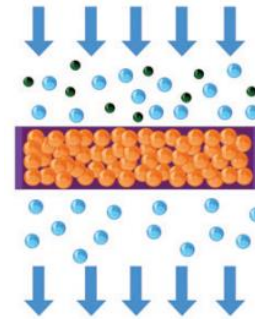
Year 5 -Spring 1

Core Knowledge

- **Materials** can be **sorted** in a variety of ways based on their **properties**.
- For example, according to their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- In some **solid materials** the **bonds** between particles **break** when **surrounded by a liquid**; this allows the **liquid to absorb the solid**; when this happens, the **solid is called a solute**, the **liquid is called a solvent** and the **result is a solution**.
- When a **solid does dissolve in a liquid** it is described as being **soluble in that solvent**; when it **cannot it is insoluble**

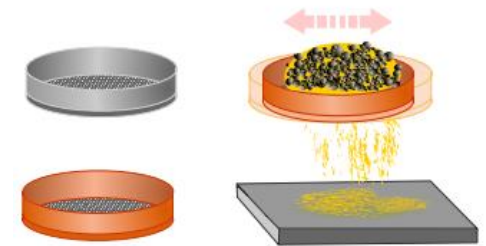
Filtering:

Filtering allows **solids and liquids** to be **separated**.



Sieving:

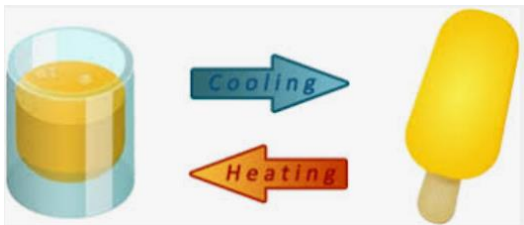
Sieving allows **solids** made up of **different sizes** parts to be **separated**.



Reversible change

A **reversible change** is one that can be **reversed** and that examples of this are **mixing, dissolving** and changes of state where **no chemical reaction** takes place

Example of a reversible change:



Irreversible change

An **irreversible change** is one that **cannot be reversed** and that examples of this often involve a **chemical change** where a **new material is made**.

Example of an irreversible change:



Solvents:

A **solvent** is **evaporated from a solution**, the **original solute** is **left behind**; the **remaining solid** will often form **crystals** – the **slower** the solvent **evaporates**, the **larger the crystals** that will be formed.

