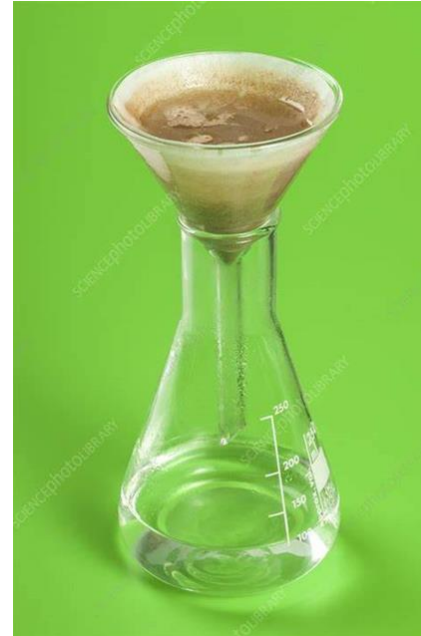


Highgate Community Primary School – Year 5 Separating Materials

Vocabulary

chemistry	the scientific study of the structure of substances
physics	the scientific study of forces and energy
substance	a solid, powder, liquid or gas
solubility	the ability of a substance to dissolve
soluble	will dissolve in liquid
solution	a solid has been mixed into a liquid and dissolved
insoluble	will not dissolve in liquid
solidify	to change from being a liquid into a solid form



Key Facts

- Know how solid particles of different sizes can be separated by sieving.
- Know how mixtures can be separated by filtering.
- Know how mixtures can be separated by evaporation.
- Know how solids, liquids and gases behave differently and how can this can be used to separate mixtures.
- Know how liquids (solutions) can be separated.

Important Knowledge Reminder

States of matter

solid	liquid	gas
● rigid	● not rigid	● not rigid
● fixed shape	● no fixed shape	● no fixed shape
● fixed volume	● fixed volume	● no fixed volume
cannot be squashed	cannot be squashed	can be squashed
Solid (at room temperature)	Liquid (at room temperature)	Gas (at room temperature)
Wood Iron Copper Plastic	water milk blood oil	oxygen carbon dioxide nitrogen steam

Key Knowledge

- Filtering separates an insoluble solid from a liquid. **FILTRATION** is when a mixture of liquids and solids which haven't dissolved can be filtered using paper with tiny holes (e.g. sand and water).
- Sieving separates solids of different sizes. **SIEVING** is a way to separate two solids of different sizes (e.g. flour and raisins).
- Evaporation separates dissolved substances from liquids. **EVAPORATION** is when a solid dissolved in a liquid (solution) can be heated. The liquid evaporates and leaves behind the solid (e.g. salt and water solution).
- Dissolving is when a solid material mixes with a liquid and is no longer visible (it can no longer be seen) Dissolving is when the particles of solids mix with particles of liquids, often appearing like it has disappeared but it has dissolved in the liquid to make a transparent solution (e.g. mixing sugar into water). It does not always need heat to occur. If a material does not dissolve, it is insoluble. If it does, it is soluble.
- Solution: A solution is a liquid in which a solid has been mixed into and dissolved e.g. sugar and water, salt and water
- Saturation point is the limit to how much solid can be dissolved in a liquid. The point where the solid will be visible.