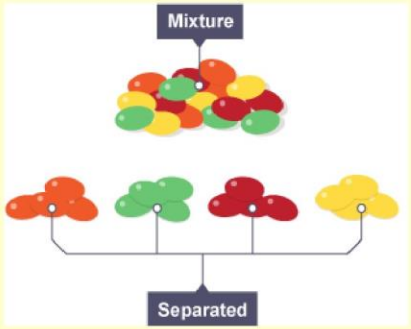
Chemistry 2 – Separation Techniques

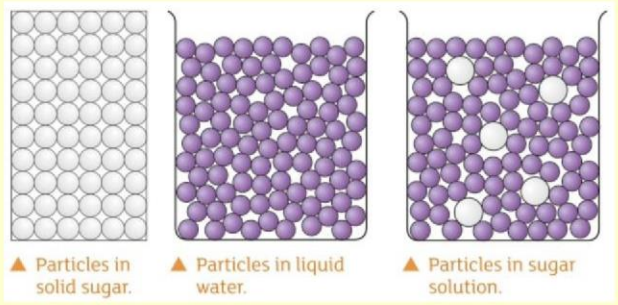
Section 1: Mixtures

Key Word	Definition
1. Mixture	A mixture is made up of substances that are **not chemically joined** together.
2. Pure Substances	A substance is pure if it has **no other substances mixed** in with it. It has a sharp melting point.
3. Impure Substances	A substance is impure if it has **different substances mixed** in with it. It does not have a sharp melting point.

Section 2: Solutions

Key Word	Definition
4. Solution	A mixture of a liquid with a solid or a gas. All parts of the mixture are the same.
5. Solvent	The liquid in which a solid or gas dissolves.
6. Solute	The solid or gas that dissolves in a liquid.
7. Dissolve	The mixing of a substance (the solute) with a liquid (the solvent) to make a solution.





Section 3: Solubility

Key Word	Definition
8. Saturated Solution	A solution in which no more solute can dissolve.
9. Solubility	The solubility of a substance is the mass that dissolves in 100g of water.
10. Soluble	The **greater the mass** of a substance you **can dissolve** in 100g of water, the more soluble the substance.
11. Insoluble	Substances that **cannot dissolve** in water are insoluble.

Section 4: Filtration

Key Word	Definition
12. Filtration	A way of **separating** pieces of **solid** that are **mixed** with a **liquid** or solution by filtration.
13. Filtrate	The **liquid** or **solution** that **collects** in the container after the mixture has passed through the filter paper.
14. Residue	The **solid** that **collects** in the filter paper.

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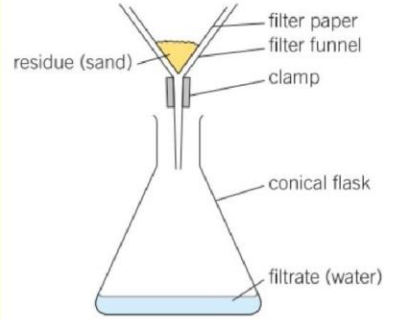
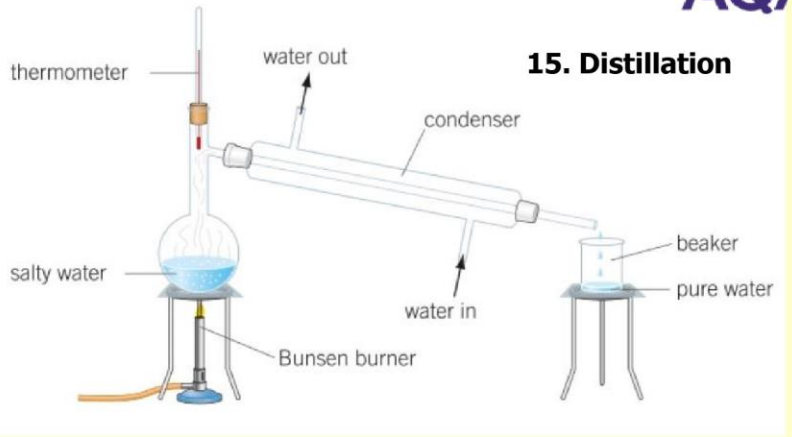
12. Filtration



15. Distillation



Section 5: Evaporation and Distillation

Key Word	Definition
15. Distillation	A technique that uses **evaporation** and **condensation** to obtain a **solvent** from a **solution**.
16. Evaporation	The change of state from **liquid** to a **gas**, when particles leave the **surface** of the liquid.
17. Condensation	The change of state from a **gas** to a **liquid**.
18. Process of distillation	• Water in the salt solution boils • Steam leaves the solution • Steam travels through the condenser and cools down • The steam condenses to form liquid water • Liquid water drips into the beaker

Section 6: Chromatography

Key Word	Definition
19. Chromatography	A technique to **separate mixtures** of **liquids** that are soluble in the same solvent.
20. Chromatogram	An **image** obtained from **chromatography**.