

# Matter

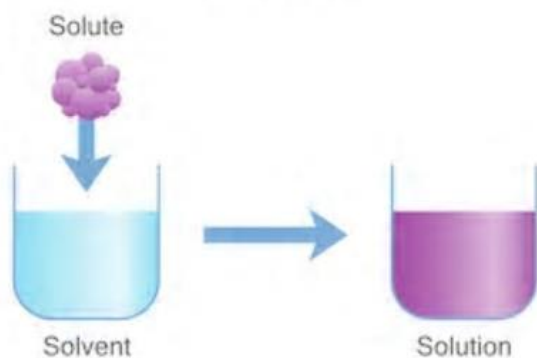
## 2. Separating mixtures

### CONCEPT 3

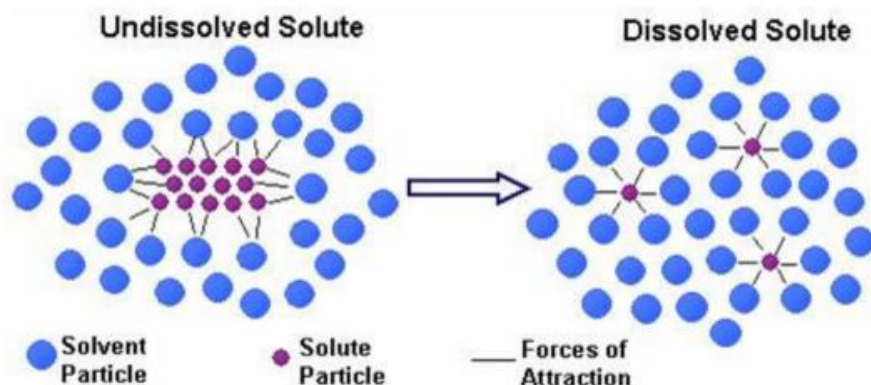
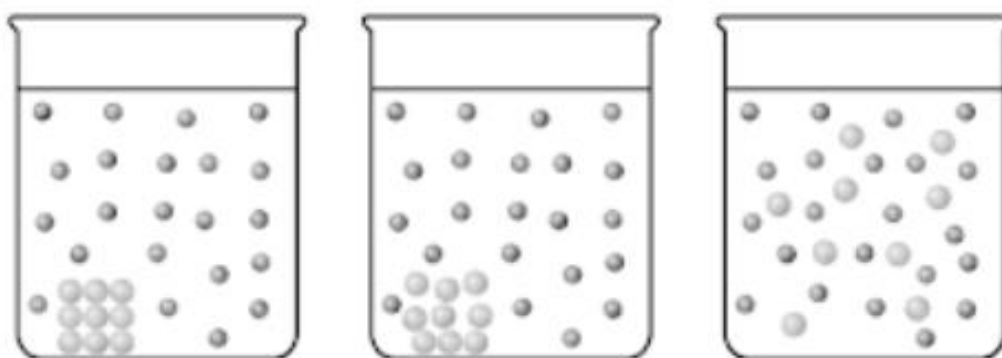
### SOLUTIONS

#### NOTES

A **solute** is a **soluble** substance that will **dissolve** in a **solvent** (liquid). The mixture of dissolved solute in a solvent is called a **solution**.



Dissolving is a process where the structure of a solute breaks down and particles of the solute mix through the solvent. This happens when the forces of attraction between the solute and solvent particles are stronger than the forces of attraction between solute and solute particles and, solvent and solvent particles.



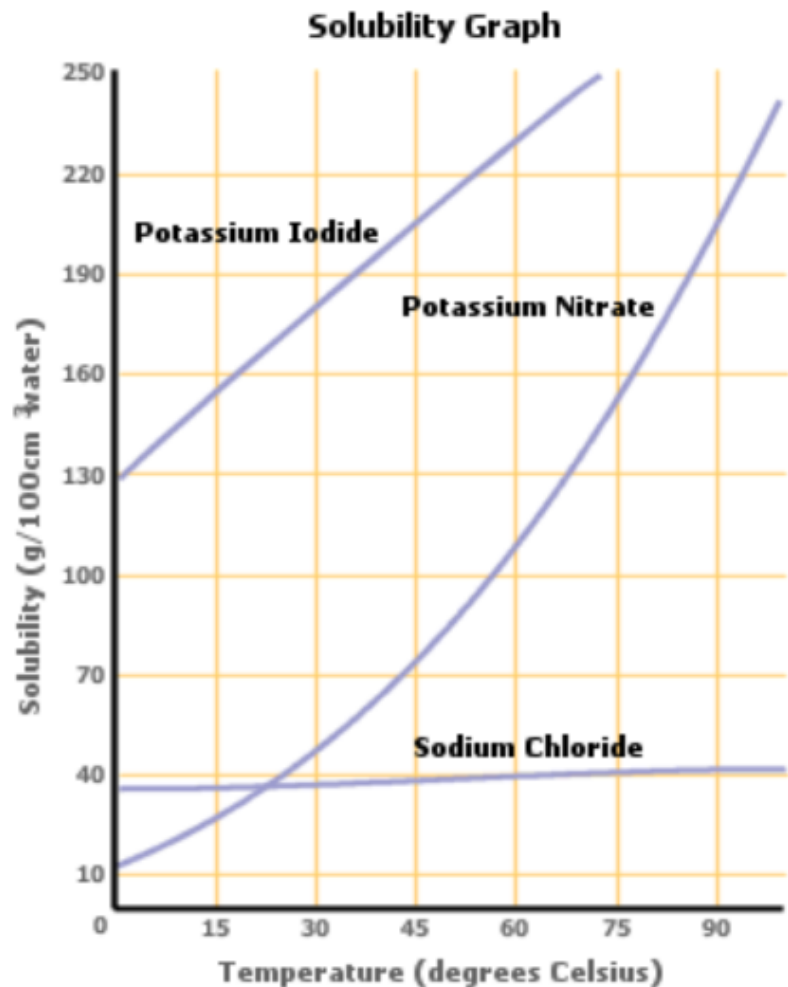
The solute particles fill the spaces between the solvent particles. When all the spaces are filled up, the solution becomes **saturated** because no more solute can be dissolved.

The **mass** of solute that dissolves in a solvent at a particular **temperature** is called its **solubility**.

Soluble substances dissolve more easily in hot water because the water molecules have more energy and move faster. They can break down and separate the solute particles more quickly.

Solubility also depends on the type of solute and solvent.

A substance that will not dissolve in a solvent is insoluble e.g. sand in water, oil in water.



**SOLUBLE**  
**Dissolves**  
(e.g. salt in water)



**INSOLUBLE**  
**Does not dissolve**  
(e.g. sand in water)

