

Solubility curves



**ASSIGN
BUSTER**

Water Chemical formula- H_2O State at room temperature- Liquid Colour- Clear Melting point- $0^{\circ}C$ Boiling point- $100^{\circ}C$ Water- good solvent and a range of substances will dissolve in it. What happens when a sugar lump dissolves in water? When the sugar dissolves... -The moving water molecules crash into the sugar particles -The sugar particles then break away from the crystal and into the water -The sugar and water particles then mix and diffuse evenly throughout.

Copper sulphate- blue crystals, hydrated because they have water trapped within them. When they are heated this water evaporates, the crystals become dehydrated and turn white. Equation for this Reaction. $CuSO_4 \cdot 5H_2O \rightarrow CuSO_4 + 5H_2O$ Solute- Solid which is dissolving Solvent- liquid in which the solute dissolves Solution- the solute and solvent mixed together Sodium hydroxide- Soluble Copper Oxide- insoluble Calcium hydroxide- Insoluble Silver iodide- insoluble Aluminium nitrate- soluble

Most ionic substances will dissolve in water but covalent substances usually wont dissolve. Solubility of a solute = mass of a solid required to saturate 100g of water at a particular temperature. Calculating Solubility 2g potassium chlorate dissolves in 20g water at $28^{\circ}C$ what is its solubility? $2 \times 100/20 = 10$. 0g potassium chlorate/100g water 4g potassium sulphate dissolves in 30g water at $50^{\circ}C$ what is its solubility? $4 \times 100/30 = 13.33$ g potassium sulphate/100g water 0g sodium chloride dissolves in 75g water at $10^{\circ}C$ what is its solubility? $30 \times 100/75 = 40$ g sodium chloride/100g water Solubility Of Gases Carbon dioxide is the gas which is dissolved in fizzy drinks to make the fizz. What happened when you placed sprite in a boiling tube and gave it a shake? The sprite fizzed up. What happened after you

heated the sprite then gave it a shake again? It fizzed just a little. Carbon dioxide is more soluble in cold liquid. The solubility of gases decreases as the temperature increases.