



*Definitions in bold are for higher tier only*

#### C4 Key Word Glossary

\* = Triple Only

**Acid:** Acids produce hydrogen ions ( $\text{H}^+$ ) in aqueous solutions. They have a pH range of 0-6.

**Alkali:** Alkalis produce hydroxide ions ( $\text{OH}^-$ ) in aqueous solutions. They have a pH range of 8-14.

**Crystallisation:** A separation technique used to produce solid crystals from a solution by evaporating the solvent.

**Displacement:** A chemical reaction in which a more reactive element displaces a less reactive element from its compound.

**Electrolysis:** The splitting up of an ionic compound using electricity. The electric current is passed through a substance causing chemical reactions at the electrodes and the decomposition of the materials.

**Electrolyte:** A solution containing free ions from the molten or dissolved ionic substance. The ions are free to move to carry charge.

**Extraction:** Extraction techniques are used to separate a desired substance when it is mixed with others.

**Filtration:** A separation technique used to separate solids from liquids.

**Negative electrode (cathode):** The electrode where hydrogen is produced if the metal in the electrolyte is more reactive than hydrogen. **It is where positively charged ions gain electrons and so the reactions are reductions.**

**Neutralisation:** The reaction when an acid and a base react to form water and a salt. **Oxidation:** A reaction involving the gain of oxygen.

**Oxidation is the loss of electrons.**

**pH scale:** The pH scale, from 0 to 14, is a measure of the acidity or alkalinity of a solution, and can be measured using universal indicator or a pH probe.

**Positive electrode (anode):** The electrode where oxygen is produced unless the solution contains halide ions then the halogen is produced. **It is where negatively charged ions lose electrons and so the reactions are oxidations.**

**\*Redox reaction:** A reaction in which both oxidation and reduction occur simultaneously. Reduction: A reaction involving the loss of oxygen.

**Reduction is the gain of electrons.**

**Reduction with carbon:** Metals less reactive than carbon can be extracted from their oxides by reduction with carbon.

**Strong acid:** A strong acid is completely ionised in aqueous solution. Examples of strong acids are hydrochloric, nitric and sulfuric acids.

**The reactivity series:** Metals are arranged in order of their reactivity in a reactivity series. This can be used to predict products from reactions.

**\*Titration:** A technique used where a solution of known concentration is used to determine the concentration of an unknown solution.

**Universal indicator:** A mixture of dyes that changes colour gradually over a range of pH and is used in testing for acids and alkalis.

**Weak acid:** A weak acid is only partially ionised in aqueous solution. Examples of weak acids are ethanoic, citric and carbonic acids.