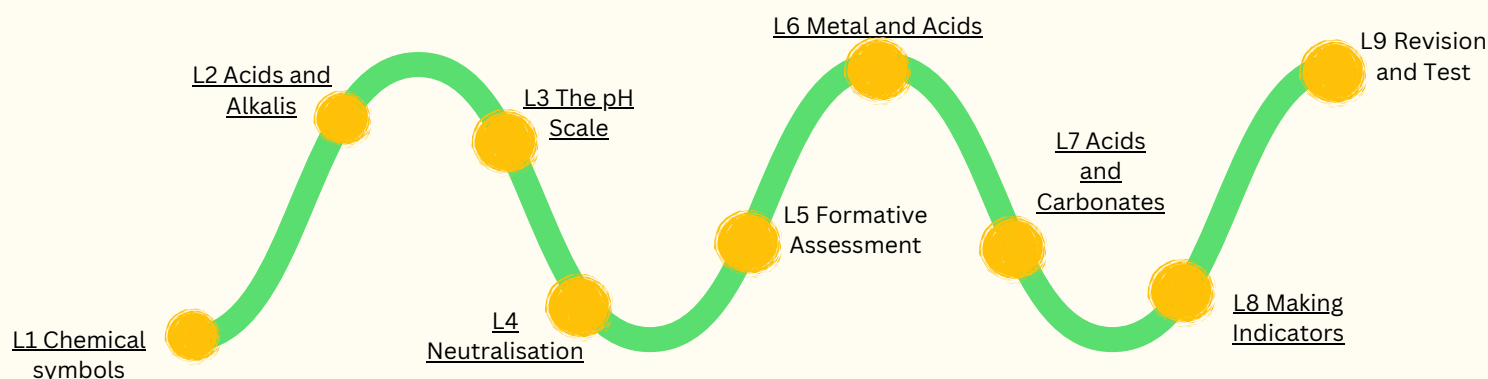


Yr7 Acids and Alkalis

Chemistry

In this topic, you will learn what acids and alkalis are and how they behave in different reactions. You will explore how to use indicators, such as litmus and universal indicator, to identify substances as acidic, neutral, or alkaline. You will investigate neutralisation reactions, where acids and alkalis react to form salts and water. You will also learn how to safely handle these substances and understand their use in everyday life and industry.



Prior learning link: KS2 Properties and changes of materials.

Key words

- **Acid** – A substance with a pH less than 7 that can donate hydrogen ions (H^+).
- **Alkali** – A soluble base with a pH greater than 7 that produces hydroxide ions (OH^-) in solution.
- **Neutral** – A substance with a pH of exactly 7, neither acidic nor alkaline.
- **pH Scale** – A scale from 0 to 14 used to measure how acidic or alkaline a substance is.
- **Indicator** – A substance that changes colour in acids and alkalis to show pH.
- **Litmus** – An indicator that turns red in acid and blue in alkali.
- **Universal Indicator** – A mixture of indicators that shows the full pH range with different colours.
- **Neutralisation** – A chemical reaction between an acid and a base or alkali, forming a salt and water.
- **Salt** – A compound formed when the hydrogen in an acid is replaced by a metal or ammonium ion.
- **Hydrochloric Acid** – A strong acid often used in lab experiments (formula: HCl).
- **Sodium Hydroxide** – A strong alkali used in experiments and industry (formula: $NaOH$).
- **Base** – A substance that reacts with an acid to neutralise it, not always soluble in water.
- **React** – To undergo a chemical change when mixed with another substance.
- **Corrosive** – A substance that can damage skin or materials by chemical action.
- **Dilute** – A solution that contains a small amount of solute (acid or alkali) in a large amount of water.

Revision Resources

[BBC KS3 Acids and Alkalis](#)