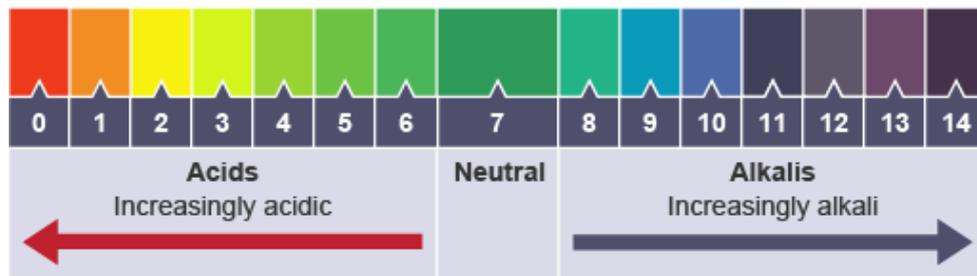


## Year 7: Acids and alkalis

- The **pH** of a solution depends on the strength of the acid: strong acids have lower pH values than weak acids.



- Acids have a pH below 7, neutral solutions have a pH of 7, alkalis have a pH above 7.
- Mixing an acid and alkali produces a chemical reaction, **neutralisation**, forming a chemical called a **salt** and water.
- Acids and alkalis can be **corrosive** or **irritant** and require safe handling.
- Hydrochloric, sulfuric and nitric acid are strong acids.
- Acetic and citric acid are weak acids.
- Some metals react with acids to produce salts and **hydrogen**.
- Carbon dioxide** is released when acids react with metal **carbonates**.
- Most substances are not **pure** elements but compounds or mixtures containing atoms of different elements.

### Keywords

**Antacid:** a substance used for **indigestion** which neutralises an excess of acid in the stomach.

**Atom:** the smallest particle of an element that can exist.

**Compound:** pure substances made up of two or more elements strongly joined together.

**Concentrated:** a solution that contains a lot of dissolved solute is concentrated.

**Corrosive:** substances that may destroy living tissues on contact are corrosive.

**Dilute:** a solution that does not contain much dissolved solute is dilute.

**Elements:** what all substances are made up of, and which contain only one type of atom.

**Indicator:** a coloured substance that shows whether the solution being tested is acidic, alkaline or neutral.

**Irritant:** a substance that can cause redness or blistering in contact with the skin.

**Litmus:** an indicator made from lichens. Acids turn blue litmus red. Alkalis turn red litmus blue.

**Molecules:** two or more atoms joined together.

**pH scale:** a number scale from 0 to 14 used to measure the strength of acidity and alkalinity.

**Toxic:** toxic substances are poisonous and may cause serious health risks and even death if inhaled, taken internally or absorbed through the skin.

**Universal indicator:** an indicator that has a range of colours showing the strength of acidity or alkalinity on the pH scale.

### Hazard Labels



Moderate Hazard



Corrosive



Flammable



Toxic