



C3.2 Student Glossary

A_r

This is the symbol for relative atomic mass.
See **relative atomic mass**.

Atom

The smallest part of an element that can exist independently.
*The centre of an **atom** is called the nucleus.*

Atomic number

The number of protons in an atom of an element. This is the smallest number of the two numbers provided beside each element on the periodic table.
*The **atomic number** of magnesium is 12.*

Boiling point

The temperature at which a substance changes state from liquid to gas. It is also the temperature at which a substance changes from gas to liquid (condenses).
*The **boiling point** of elements in group 1 decrease as you go down the group.*

Chemical formula

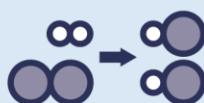
A series of chemical symbols showing the number of atoms of each element in a compound.
*The **chemical formula** for Magnesium Oxide is MgO.*

Chemical symbol

A letter or series of letters used to represent an element.
The first letter is always uppercase (capital).
C for carbon, Na for sodium.

Compound

A substance made up of two or more different elements chemically bonded together.
Water is a **compound** of hydrogen and oxygen.





Concentration The mass of solute dissolved in a given volume of solvent
The concentration of the copper sulphate solution was 0.1 g/cm³

Concentrated If a solution is concentrated, there is a large mass of solute in a given volume of solvent.
The salt water solution was concentrated because lots of salt was added to a small volume of water.

Conservation of Mass The law of conservation of mass states that the total mass of reactants in any chemical reaction equals the total mass of products
5 g of iron and sulfur reacted together to make 5 g of iron sulfide. This demonstrates the Law of Conservation of Mass.

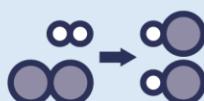
Crystallisation A technique used to produce solid crystals from a solution. This occurs when a solution is warmed and the solvent is evaporated, leaving behind crystals of the solute.
When copper sulphate solution is warmed slowly, crystallisation of blue copper sulphate crystals is observed.

Dilute To decrease the concentration of a liquid by mixing it with water or another liquid.
I plan to dilute the acid by adding more water.

Element A substance made of only one type of atom.
Oxygen is an example of an element.

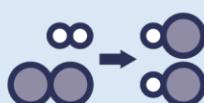
Evaporation A separation technique in which a solvent is heated until it vaporises, leaving any dissolved substances behind.
Water and dissolved salt can be separated by evaporation.

Filtration A separation technique which can separate a mixture of a liquid and an insoluble solid, by passing the liquid through filter paper.
When separating sand and water, filtration is used because the sand cannot pass through the filter paper, whereas water can.





Formulae	Plural of formula See chemical formula
Insoluble	A substance is insoluble if it cannot be dissolved in a solvent <i>Wood is insoluble in water</i>
Mass number	The total number of protons and neutrons in the nucleus of an atom. It is the larger of the two numbers beside each element in the periodic table. <i>Oxygen has a mass number of 16.</i>
Melting	A change of state that occurs when a solid changes to a liquid. <i>Melting solid ice will form liquid water.</i>
Melting point	The temperature at which a substance changes from solid to liquid (melts). It is also the temperature at which a substance changes from liquid to solid (freezes). <i>The melting point of water is 0° Celsius.</i>
Metal	A material which is typically hard, shiny, malleable and ductile, found in the middle and on the left-hand side of the Periodic table. <i>Gold is an example of a metal.</i>
Mixture	A material consisting of two or more different substances that are not chemically combined. <i>Air is a mixture of gases.</i>
Molecule	A small group of non-metal atoms chemically bonded together. <i>Oxygen gas is made up of many oxygen molecules, each with the chemical formula O₂.</i>



**M_r**

This is the symbol for relative formula mass

See **relative formula mass**

Neutralisation

A chemical reaction in which an acid and a base react with each other.

Neutralisation reactions produce a salt and water.

Periodic table

A table of all the known elements arranged in order of atomic number so that elements with similar properties are in columns, known as groups.

All of the elements we know are represented in the **Periodic Table**.

**Relative
atomic mass**

The relative atomic mass of an element is the relative mass of its atoms compared to the mass of a carbon-12 atom. The relative atomic masses for each element are given in the Periodic Table.

The **relative atomic mass** of an oxygen atom is 16.

**Relative
formula mass**

The relative formula mass of a substance is the sum of the relative atomic masses of its atoms, in the numbers shown in it's chemical formula.

The **relative formula mass** of a molecule of H₂O is 18.

Solute

A substance that can be dissolved in a solvent.

*Salt is a **solute** because it can be dissolved in water.*

Soluble

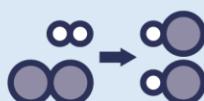
A substance is soluble if it can be dissolved in a solvent

*Sugar is **soluble** in water*

Solution

A mixture of a dissolved solute and a solvent.

*A **solution** of salt and water was used.*



Solvent

A substance in which a solute can dissolve
*Water is a **solvent** because salt can dissolve in it*

Subscript

The numbers that come after and below a chemical symbol in a chemical formula, to indicate the number of atoms of that element.
*The **subscript** number two shown in a molecule of CO₂ indicates that it contains 2 atoms of oxygen.*

Transition metal

An element positioned in the central block of the periodic table, between Group 2 and Group 3.
*Iron is an example of a **transition metal**.*

