



Chemistry – Year 10 Useful Links

Topic 1 - Atomic Structure and the Periodic Table

Topic	YouTube Link
I.1 - Atoms	GCSE Chemistry - Atoms & Ions
I.2 - Elements, Isotopes & Relative Atomic Mass	GCSE Chemistry - Elements, Isotopes & Relative Atomic Mass
I.3 - Compounds, Molecules & Mixtures	GCSE Chemistry - Differences Between Compounds, Molecules & Mixtures GCSE chemistry questions - atoms, elements and compounds GCSE chemistry revision - BBC Bitesize
I.4 - Balancing Chemical Equations	GCSE Chemistry - Balancing Chemical Equations (2026/27 exams)
I.5 - Filtration & Crystallisation	GCSE Chemistry - Filtration, Evaporation & Crystallisation
I.6 - Distillation	GCSE Chemistry - Fractional Distillation and Simple Distillation GCSE chemistry questions - pure substances and mixtures GCSE chemistry revision - BBC Bitesize
I.7 - The History of The Atom	GCSE Chemistry - History of the Model of the Atom
I.8 - Electronic Structure	GCSE Chemistry - Electron Arrangement GCSE chemistry questions - atomic structure GCSE chemistry revision - BBC Bitesize
I.9 - Development of the Periodic Table	GCSE Chemistry - Modern Periodic Table GCSE chemistry questions - the periodic table GCSE chemistry revision - BBC Bitesize
I.10 - Metals & Non-Metals	GCSE Chemistry - Metals and Non-Metals
I.11 - Group 1 (Alkali Metals)	GCSE Chemistry - Group 1 Alkali Metals
I.12 - Group 7 & Group 0 (Halogens & Noble gases)	GCSE Chemistry - Halogens and Noble Gases GCSE chemistry questions - groups in the periodic table GCSE chemistry revision - BBC Bitesize GCSE chemistry questions - transition metals GCSE chemistry revision - BBC Bitesize
Podcast	Revise atomic structure and the periodic table - BBC Bitesize

Topic 2 - Bonding, Structure and Properties of Matter

Topic	YouTube Link
2.1 - Formation of Ions	GCSE Chemistry - Formation of Ions
2.2 - Ionic Bonding	GCSE Chemistry - What is Ionic Bonding? How Does Ionic Bonding Work? Ionic Bonds Explained
2.3 - Ionic Compounds	GCSE Chemistry - What is an Ionic Compound? Ionic Compounds Explained GCSE chemistry questions - ionic compounds GCSE chemistry revision - BBC Bitesize
2.9 - Metallic Bonding	GCSE Chemistry - Metallic Bonding GCSE chemistry questions - metals and alloys GCSE chemistry revision - BBC Bitesize
2.5 - Covalent Bonding	GCSE Chemistry - Covalent Bonding
2.6 - Types of Covalent Structures	GCSE Chemistry - Properties of Simple Molecular Substances & Giant Covalent Structures GCSE Chemistry - What is a Polymer? Polymers / Monomers / Their Properties Explained (2026/27 exams)- just the start! GCSE chemistry questions - small molecules GCSE chemistry revision - BBC Bitesize
2.7 - Diamond & Graphite	GCSE Chemistry - Allotropes of Carbon - Diamond and Graphite GCSE chemistry questions - giant covalent molecules GCSE chemistry revision - BBC Bitesize
2.8 - Graphene & Fullerenes	GCSE Chemistry - Allotropes - Graphene and Fullerenes
2.9 - States of Matter	GCSE Chemistry - States of Matter & Changing State
2.10 Nanoparticles	GCSE Chemistry - Nanoparticles GCSE chemistry questions - nanoscience and nanoparticles GCSE chemistry revision - BBC Bitesize
Podcast	Revise bonding, structure and properties with the BBC Bitesize science podcast - BBC Bitesize

Topic 7 - Organic Chemistry

Topic	YouTube Link
7.1 - Hydrocarbons	GCSE Chemistry - Nanoparticles
7.2 - Alkanes - Properties & Combustion	GCSE Chemistry - Alkanes: properties & combustion GCSE chemistry questions - crude oil, hydrocarbons and alkanes GCSE chemistry revision - BBC Bitesize
7.3 - Fractional Distillation	GCSE Chemistry - Crude Oil and Fractional Distillation
7.4 - Cracking & Alkenes	GCSE Chemistry - Cracking Crude Oil & Alkenes

Topic 9 - Chemistry of the Atmosphere

Topic	YouTube Link
9.1 - The Evolution of the Atmosphere	GCSE Chemistry - Evolution of the Atmosphere
9.2 - Greenhouse Gases & Climate Change	GCSE Chemistry - Global Warming & Climate Change
9.3 - Carbon Footprints	GCSE Chemistry - What is a 'Carbon Footprint'? - How to Reduce Carbon Footprint
9.4 - Air Pollution	GCSE Chemistry - Air Pollution

Year 9 Chemistry Spelling List

Key Word	Definition
Accurate	A result close to the true value
Chromatography	Technique to separate coloured dyes
Covalent	A shared pair of electrons between two (usually non metal) atoms
Dependent	Variable that is measured
Electrostatic	Forces between opposite charges e.g. ions in an ionic compound
Formulae	Plural of 'formula'
Filtration	Technique used to separate solids and liquids
Hydrochloric acid	Common acid used in the lab
Ionic (bond)	Electrostatic attraction between positive and negative ions
Independent	Variable that is changed
Intermolecular forces	Weak forces between molecules
Neutron	Neutrally charged subatomic particle found in the nucleus
Nitric acid	Common acid used in the lab
Precise	Results with little spread about the mean value
Repeatable	Data are repeatable if a person can do their experiment again and obtain similar results/patterns.
Reproducible	Data are reproducible if someone else can do the experiment again and obtain similar results/patterns.
Resolution	The smallest change in a quantity that gives a change in the reading that can be seen
Separate	Technique used to divide a substance into its constituent parts
Sulfuric acid	Common acid used in the lab
Temperature	Physical quantity that expresses quantitatively the attribute of hotness or coldness.

Year 9 Key Words and definitions

Key Word	Definition
Atom	The smallest part of an element that can exist.
Element	A substance made of only one type of atom.
Compound	A substance formed when two or more elements are chemically combined in fixed ratios.
Mixture	Two or more substances not chemically combined and can be separated by physical methods.
Atomic number	The number of protons in the nucleus of an atom.
Mass number	The total number of protons and neutrons in an atom.
Isotope	Atoms of the same element with different numbers of neutrons.
Relative atomic mass	The weighted average mass of an element's atoms compared with carbon-12.
Periodic table	A table of elements arranged in order of increasing atomic number showing repeating trends.
Ionic bonding	Bonding caused by the attraction between oppositely charged ions.
Covalent bonding	Bonding where atoms share pairs of electrons.
Metallic bonding	Bonding in metals where positive ions are held together by delocalised electrons.
Intermolecular forces	Weak forces of attraction between molecules
Crude oil	A finite resource that is a mixture of hydrocarbons.
Hydrocarbon	A compound made of hydrogen and carbon only.
Alkane	A saturated hydrocarbon with the general formula C_nH_{2n+2} .
Fractional distillation	A process that separates crude oil into fractions based on boiling point.
Cracking	The process of breaking large hydrocarbons into smaller, more useful molecules.
Alkene	An unsaturated hydrocarbon containing a carbon-carbon double bond.
Greenhouse gas	A gas that absorbs infrared radiation and contributes to global warming.
Carbon footprint	The total amount of greenhouse gases produced over a product's life cycle.
Atmospheric pollutant	A substance in the air that has harmful effects on humans or the environment.