



CHEMISTRY CURRICULUM LEARNING JOURNEY

Knowledge & Concepts increase students depth/ challenge and build on previous learning where topics are revisited throughout their learning journey

Due to facility and resource considerations, not all classes study the same topics at the same time. The table below depicts the content covered within each year group and also how the curriculum progresses where topics are revisited.

		Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Half Term 1	Topics	Elements, atoms and compounds	Periodic table	Atomic structure and bonding	Periodic table	Compounds	Bonding and trends across periods	Electronegativity and trends across periods
	Knowledge	Elements, atoms – basic Compounds, chemical formulae	Properties of elements	History of the atom, development of the periodic table, and types of bonding	Calculations involving compounds and mass, and re-forming elements	Functional groups (Triple Science only)	3D structures of compounds, trends across period 3 & grp 2 and 7	Transition metals, trends across period 3
Half Term 2	Topics	Reactions	Reactions	Reactions	Reactions	Reactions	Reactions	Reactions
	Knowledge	Simple reactions e.g. oxidation, exothermic & endothermic, and thermal decomposition	Neutralisation and making salts	Exothermic and endothermic reactions, fractional distillation, cracking, and combustion	Obtaining metals through displacement, and making salts	Reacting compounds with different functional groups (Triple Science only)	Making compounds, and outlining reaction mechanisms	Polymerisation, inorganic compounds in aq. solutions, making compounds/mechanisms
Half Term 3	Topics	Acids and alkali	Metal and acids	Metals and acids	Acids and alkali	Acids and alkali	Acids and alkali	Acids and alkali
	Knowledge	pH scale	Determining reactivity series	Metallic bonding and structures	Obtaining metals from electrolysis	Making fertilisers (Triple Science only)	Titration, calculations, and reagents in organic	Buffers, reagents in organic, calculations
		Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Half Term 4	Topics	Materials	Materials	Materials	Materials	Materials	Materials	Materials
	Knowledge	Particles and their behaviours	Ceramics, polymers and composites	Materials from crude oil	Pure substances and formulas	Revision	Organic synthesis	Polymers (e.g. nylon practical), organic synthesis
	Topics	Separation techniques	Separation techniques	Separation techniques	Separation techniques	Separation techniques	Separation techniques	Separation techniques



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Half Term 5	Knowledge	Differences between elements, compounds and mixtures	Chromatography, filtration, evaporation, and distillation	Atmospheric pollutants	Purifying wastewater to produce potable water	Revision	Fractional distillation, displacement, precipitation reactions	Chromatography – drugs and amino acids
Half Term 6	Topics	Equations	Equations	Equations	Equations	Equations	Equations	Equations
	Knowledge	Word equations, and symbol (Easy)	Word and symbol	Atmosphere reactions	Extracting metals from ores	Revision	Titration, calculating conc, analysing redox reactions and constructing half equations, balancing oxidation equations, equilibrium Kc, organic synthesis	Chelation, reactions of inorganic compounds in aq. solutions to form complex ions and balancing those, equilibrium equations for Kp/ Ka, organic synthesis