

Skills

Knowledge

Future Education, Employment & Training

KS5 Study

Year 11 "Becoming KS5 Ready"

C10 – Earth's Resources

Sustainable development, drinking water, corrosion, phytomining, alloys, the Haber process, ceramics, fertilisers.

C9 – Chemistry of the Atmosphere

Composition of air, earths early atmosphere, carbon footprint, pollutants, global warming, climate change.

C8 – Chemical Analysis

Purity, formulations, chromatography, gas tests, flame tests, ion tests.

Year 10 "Developing into Independent Learners"

C6 – Rates & Equilibria

Factors affecting rate of reaction, collision theory, investigating rate of reaction, catalysts, Le Chatelier, Dynamic Equilibrium

Year 11

C7 – Organic Chemistry

Crude oil, fractional distillation, cracking, alkenes, carboxylic acids,

C5 – Energy Changes

Endothermic, temperature changes practical, exothermic, reaction profile diagrams, bond energies, batteries, fuel cells.

C4 – Chemical Changes

Displacement reactions, extraction of copper, pH, acids, alkalis and indicators, making a salt, bases and salts, electrolysis, products of electrolysis.

Year 9 "Developing Skills to Enhance Learning"

C3.1 – Extending the Mole

Calculating concentrations, empirical formulae, titration, atom economy, percentage yield, gas volumes.

Year 10

C3.1 – Introducing the Mole

Conservation of mass, calculating moles, calculations using masses, Avogadro's constant.

C2 – Bonding and Structure

States of matter, ionic bonding, ionic lattices, ionic compounds, covalent bonds, simple molecules, allotropes of carbon, polymers, metallic bonding, nanotechnology.

C1 – Atomic Structure & the Periodic Table

Chromatography, elements, distillation, atomic number and isotopes, electron configuration, history of the atom, relative atomic mass, group 1, group 7, the modern periodic table, transition metals.

Year 8 "Taking Responsibility for Learning"

The Earth

Atmosphere, the carbon cycle, climate change, extracting metals, recycling.

Year 9

Chemical Reactions – Metals, Non-Metals & Chemical Energy

Metals & acids, metals & oxygen, metals & water, metal displacement, energy profiles, endothermic and exothermic reactions, bond energies, catalysts.

Year 7 "Transition to High School"

Earth

Earth structure, rock types, rock cycles, weathering.

Year 8

Matter – Periodic Table & Types of Reaction

Groups and periods, the atom, metals and non-metals, Group 0 – the noble gasses, Group 1 – alkali metals, Group 7 – the halogens, conservation of mass, thermal decomposition, combustion, equations.

Chemical Reactions – Elements, Acids & Alkalis

Compounds, elements, neutralisation, acids and alkalis, making salts, indicators and pH.

Year 6 Induction

Year 7

Intro to Science

Fundamental skills, graph plotting.

Matter – Particles & Separating Mixtures

States of matter, the particle model, melting & freezing, chromatography, diffusion, gas pressure.

Skills

Year 13

"Are you Fit for FEET?"



Year 12

"Introduction to A-Level Mindset"



Knowledge

