



Chemistry - Curriculum Overview

Year 12

Half Term:	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics:	3.1.1 Atomic structure, 3.1.3 Bonding 3.1.2 Amount of substance	3.1.3 Bonding, 3.3.1 Introduction to Organic Chemistry, 3.3.2 Alkanes 3.1.4 Energetics	3.3.2 Alkanes, 3.3.3 Halogenoalkanes, 3.3.4 Alkenes 3.1.5 Kinetics, 3.1.6 Chemical Equilibria, Le Chatelier's principle and K_c	3.3.5 Alcohols, 3.3.6 Organic Analysis 3.1.7 Oxidation, reduction and redox equations, 3.2.1 Periodicity, 3.2.2 Group 2 The alkaline Earth metals, 3.2.3 Group 7 (17) The Halogens	Revision of AS Chemistry and mock exams Revision of AS Chemistry and mock exams	3.3.7 Optical isomerism, 3.3.8 Aldehydes and ketones. 3.1.9 Rate equations, 3.1.10 Equilibrium constant K_p for homogeneous systems, 3.1.12 Acids and bases.
Assessment & End Points:	Atomic structure and bonding test, Amount of substance test, Assessed Homeworks, RP1 - Make up a volumetric solution and carry out a simple acid-base titration. CPAC skills assessed when each required practical is completed.	Introduction to Organic Chemistry test, Energetics test, Assessed Homeworks, RP2 - Measurement of an enthalpy change, CPAC skills assessed when each required practical is completed.	Alkenes and halogenoalkanes test, Kinetics and Equilibria test, Assessed Homeworks, RP3 - Investigation of how the rate of a reaction changes with temperature. CPAC skills assessed when each required practical is completed.	Alcohols and Organic analysis test, Redox equilibria test, Periodicity, Group 2 and group 7 test, Assessed Homework, RP4 - Carry out simple test-tube reaction to identify: cations - group, NH_4^+, anions - group 7 (halide ions), OH^-, CO_3^{2-}, SO_4^{2-}, RP5 - Distillation of a product from a reaction, RP6 - Test for alcohol, aldehyde, ketone and carboxylic acid. CPAC skills assessed when each required practical is completed.	Mock exams and final exams	Optical isomerism test, Rate equations test, Assessed Homeworks, RP7 - Measuring the rate of reaction: • by an initial rate method • by a continuous monitoring method. CPAC skills assessed when each required practical is completed.



Chemistry - Curriculum Overview

Year 13

Half Term:	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topics:	3.3.9 Carboxylic acids and derivatives, 3.3.10 Aromatic Chemistry 3.1.12 Acids and bases,	3.3.11 Amines, 3.3.12 Polymers, 3.3.13 Amino acids, proteins and DNA, 3.3.14 Organic Synthesis. 3.1.8 Thermodynamics, 3.3.15 Nuclear Magnetic Resonance	3.3.16 Chromatography, 3.2.5 Transition metals. 3.1.11 Electrode potentials and electrochemical cells.	3.2.6 Reactions of ions in aqueous solution 3.2.4 Properties of Period 3 elements.	CONSOLIDATION, REVISION AND PREPARATION FOR FINAL EXAMS.	CONSOLIDATION, REVISION AND PREPARATION FOR FINAL EXAMS.
Assessment & End Points:	Carboxylic acids and derivatives test, Acids and bases test, Assessed Homeworks, RP9 - Investigate how pH changes when a weak acid reacts with a strong base and when a strong acid reacts with a weak base, "RP10 - Preparation of: <ul style="list-style-type: none"> • a pure organic solid and test of its purity • a pure organic liquid. " CPAC skills assessed when each required practical is completed.	Amine and amino acids test, Thermodynamics test, NMR Test Assessed Homeworks.	Chromatography test, Transition metals test, Electrochemistry test, Assessed Homeworks, RP8 - Measuring the EMF of an electrochemical cell, RP12 - Separation of species by thin-layer chromatography. CPAC skills assessed when each required practical is completed.	Reactions of ions in aqueous solution test Period 3 elements test, Assessed Homeworks, CPAC skills assessed when each required practical is completed.	Past exam paper-based assessments.	Final exams