Curriculum area Chemistry AQA A-level (7405)

Topics	Assessment	How you can support your child's learning at home E.g. Books, Websites, Family learning through visits
<u>Physical Chemistry:</u> • Atomic Structure • Amount of substance • Bonding • Energetics • Chemical equilibria • Redox • Thermodynamics • Equilibrium constant K_p • Electrode potentials and electrochemical cells • Acids and bases <u>Inorganic Chemistry:</u> • Periodicity • Group2 • Group 7 • Properties of Period 3 elements and their oxides • Transition metals • Reactions of ions in aqueous solution <u>Relevant practical skills</u>	<u>Paper 1</u> 2 hour exam 105 marks A mixture of short and long-answer questions 35% of the overall A-level Grade	Pupils will be loaned textbooks AQA AS Chemistry Year 1 and Year 2 Purchase the revision guides. Monitor and support. Guidance with organisation of school work, meeting deadlines for homework, preparing for assessments. File dividers will be provided with specification points to aid organisation. Online material available: AQA website: https://www.aqa.org.uk Chemguide: https://www.chemguide.co.uk Chemrevise: https://chemrevise.org Royal Society of Chemistry: https://www.rsc.org Physics and Maths Tutor: https://www.physicsandmathstutor.com Revisely: https://www.revisely.co.uk Seneca Learning: https://www.senecalearning.com

Physical Chemistry: • Kinetics • Rate equations Organic Chemistry: • Intro to Organic Chem • Alkanes • Halogenoalkanes • Alkenes • Alcohols • Organic analysis • Optical isomerism • Aldehydes and Ketones • Carboxylic acid and derivatives • Aromatic chem • Amines • Polymers • Amino acids, proteins, DNA • Organic synthesis • NMR spectroscopy • Chromatography • Relevant practical skills	Paper 2 2 hour exam 105 marks A mixture of short and long answer questions 35% of the overall A-level Grade	Encourage students to attend help sessions offered at school by staff at lunchtimes, after school and during curriculum enhancement sessions. Following each lesson students are required to spend an equivalent proportion of time consolidating work by reading textbook topics and completing summary questions. At the end of each topic an end of topic assessment will be conducted, students are expected to complete the practice questions in the text book in preparation for the assessment. Completion of past examination papers, available in school and online.
• Any content • Any practical skills • 20% mathematical skills, assessment throughout all exam papers	Paper 3 2 hour exam 90 marks; 40 marks of questions on practical techniques and data analysis, 20 marks of questions testing across the specification, 30 marks multiple choice. 30% of the overall A-level grade	

<u>Practical Mastery Criteria</u> Pupils are assessed internally across 12 compulsory experiments; pupils are graded as practically competent if they can demonstrate the 5 competencies: 1. Follow written procedures 2. Applies investigative approached and methods 3. Safely uses a range of equipment and materials 4. Makes and records observations 5. Researches, references and reports Pupils log experiments in a lab book, these are completed throughout duration of course alongside the appropriate teaching content. Pupils receive a grade of YES/No for practical competency.	The 6 required practical activities for year 2 of the A-level course are: 1. Measuring the rate of reaction: by an initial rate method and by a continuous monitoring method. 2. Measuring the EMF of an electrochemical cell. 3. Investigate how pH changes when a weak acid reacts with a strong base and when a strong acid reacts with a weak base. 4. Preparation of: a pure organic solid and test of its purity; a pure organic liquid. 5. Carry out simple test-tube reactions to identify transition metal ions in aqueous solution. 6. Separation of species by thin-layer chromatography.	