Chemistry Curriculum Intent

Chemistry is a well-respected and rigorous academic subject which provides many transferable skills for those who study it. We endeavour to provide a pathway for our students to explore, question evidence and draw conclusions based upon a mixture of logical, practical and theoretical based activities.

Chemistry will inspire the next generation of learners to be able to see the world around them in a new light by encouraging them to discover, appreciate and see their world through the eyes of a scientist.

Students will be expected to demonstrate and apply the knowledge, understanding and skills described in the content. In addition, they will be expected to analyse, interpret and evaluate a range of scientific information, ideas and evidence using their knowledge, understanding and skills.

Practical work is central to any study of chemistry. For this reason, the specification includes core practical activities which form a thread linking theoretical knowledge and understanding to practical scenarios. In following this thread, students will build on practical skills learned at GCSE, becoming confident practical chemists, handling apparatus competently and safely. Using a variety of apparatus and techniques, they should be able to design and carry out both the core practical activities and their own investigations, collecting data which can be analysed and used to draw valid conclusions

Throughout Year 12 students extend their understanding of topics such as amounts of substance, patterns in the periodic table and equilibria, and are introduced to ideas such as oxidation states and organic mechanisms.

In Year 13, the course builds on this foundation by extending the student's ideas about organic, inorganic and physical chemistry.

Curriculum Implementation						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 12	• Amount of Substance • Atomic Structure and The Periodic Table • Bonding and Structure • Redox • Organic Chemistry 1		• Completion of any topics needed and then: • Organic Chemistry (continued) • Modern Analytical Techniques • Energetics • Inorganic Chemistry and the Periodic Table		• Completion of any topics needed and then: • Kinetics • Equilibria • Equilibria 2 (A - Level content)	
Year 13	• Equilibrium II • Acid-Base Equilibria • Enthalpy • Chirality • Carbonyl Compounds • Carboxylic acids • Organic structure/ practical skills		• Benzene - Arenes • Amines, Amides, Amino acids & proteins • Organic Analysis • Redox • Further Kinetics • Transition Metals		• Revision/ exam preparation • Paper 3 skills • CPAC catch up	

Chemistry Curriculum Impact KS5

		FORMATIVE; *The instructional guidance that identifies central points of learning and plans for the progression of individual students.*	SUMMATIVE; *This describes individuals learning at the end of an instructional unit by comparing it against a standard or benchmark. (High Stakes Assessment)*	EVALUATIVE; *This is about institutional accountability and comes after terminal exams. External agencies.*
TIMESCALE	**Annually**		**Year 12:** - End of Year assessment (June) - based upon all topics taught in year 12. - 2 Papers are sat for the two halves of the course - 90 minutes for each paper **Year 13:** - Mock Examinations (September, December and February) - based upon all topics taught to this point. - 2 Papers are set for the two halves of the course. - 105 minutes for each paper - Paper 3 mock to be sat after Easter - 150 minutes.	Nationally standardised summative assessment takes the form of A-levels and vocational qualifications at the end of Key Stage 5. **A-level exam board**: Edexcel Pearson **Exam structure:** Paper 1 : 1hr 45 (30%) Paper 2 : 1hr 45 (30%) Paper 3 : 2hr 30 (40%) *CPAC (practical requirement) - pass needed*
	Interim (termly or half-termly)		**<u>Cumulative Testing:</u>** ● Each half term- yr 12 OR termly - yr13 students will sit cumulative tests covering all topics covered to date. ● The exam will use questions taken from the exam board which have previously been in real exams. ● The assessments will be approximately 50 minutes. ● Exams are marked by specialists and moderated in-house. ● Grade boundaries from the most recent exam series are used where possible and fine grades used to identify those needing intervention/ additional support	

			<u>End of topic exams</u> End of topic test continuing practice questions for the cumulative tests are provided to students to complete as homework / during independent study time. Students complete this test under exam conditions and then will be provided with feedback based on how to improve their performance. **<u>Folder checks</u>** Folders are collected half termly to ensure students are managing their notes and time well. Feedback is provided via pink sheets. **<u>Practical Assessments:</u>** Practicals will constitute part of each exam paper and There are 16 core practicals identified by Edexcel with individual practical skills which are assessed for CPAC. Each CPAC skill which is awarded (pass/fail) separately from the A level exams needs to be passed overall in order to obtain a pass for CPAC. Each practical has specific criteria staff are to assess and monitor via a shared spreadsheet provided by the exam board. Students are given practical lab books to complete with the data from their practicals and questions designed to test and enhance their practical knowledge.	
	Weekly	**Teachers role:** - Identify how students are performing and use this to provide support, evaluate student learning and plan future lessons. - Provide oral and/or written feedback. - Keep track of student progress using department internal and school wide data systems. - Scaffold feedback to students for effective self/peer assessment.		

		- Exam questions set fortnightly according to schemes of work - students submit for marking and feedback given. **Students role:** - Engage in self assessment. - Engage in peer assessment. - Be proactive in ReACT taks. - Revise content. - Redraft and submit work which is completed to the best of their abilities. - Identify their own strengths and weaknesses and ask for support from their subject teachers. .	