

Year 11: Chemistry

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1
Topics	C8: Chemical analysis Foci: Chromatography, testing for gases, testing for ions	C10: Using resources Foci: corrosion, resources and sustainability, treating water C9: Chemistry of the atmosphere Foci: evolution of the atmosphere, greenhouse gases and climate change, carbon footprint	Review of the C1-10: Review of the C1-10 (whole course) with focused revision for different groups Foci: revising subject content, developing exam technique and applicable maths/practical skills	Review of the C1-10: Review of the C1-10 (whole course) with focused revision for different groups Foci: revising subject content, developing exam technique and applicable maths/practical skills	Review of the C1-10: Review of the C1-10 (whole course) with focused revision for different groups Foci: revising subject content, developing exam technique and applicable maths/practical skills
	C6: Rates of reaction Foci: Methods of measuring rates of reaction	C6: Rates of reaction Foci: graph drawing skills C8: Chemical analysis Foci: Chromatography, testing for gases, testing for ions			
Assessments	Mock exam: whole paper 1	End of topic assessment based on C10 topic	Mock exam: whole paper 2	Cumulative assessment on topics revised with a focus on practical skills	GCSE Exams
		End of topic assessment based on C6			
Building on Prior Learning	Substantive Knowledge Students will use knowledge of ions to practice testing for them. They will develop ideas on resources and sustainability, including different types of useful material and where we obtain resources from. This builds on previous ideas on crude oil. Disciplinary/procedural Knowledge Students will continue to develop their practical skills from yr 9 and 10. They will build on knowledge they already have about using methods and collecting results and develop how to successfully plan the different aspects of a full scientific investigation, especially developing & using technical language of scientific enquiry. They will continue to take more responsibility for running their own scientific investigation. They should be competent in all areas of practical assessment by the end of the course.				
Cultural Capital	There is cultural capital in abundance in this programme of study: Students will develop understanding of petrol, diesel and other hydrocarbons. This will include some discussion of environmental issues, including climate change, and will be developed through the course of the year. Environmental issues are discussed heavily in the chemistry of atmosphere topic.				
Mastery	In terms of mastery Students will develop observations made from different chemical tests to explain chemical reactions that have occurred. They will use these to predict observations for other substances given their position on the periodic table. Student will name some greenhouse gases, and then use these to explain what the greenhouse effect is. They will describe how short wave radiation and long wave radiation link to the greenhouse effect. They will recognise the importance of peer review of results and of communicating results to a wide range of audiences.				
Development of Character	A wide range of virtues are covered through the teaching of Chemistry: For example resilience, respect and intellectual curiosity are established while learning about how different scientific models have developed. Students will develop confidence and skills for collaboration through practical work.				
Extra-Curricular opportunities	In School: STEM Club (across all 3 science) Outside of School: Science Live GCSE Event in Birmingham				
Metacognitive Learning	As the year progresses, students will have more and more opportunity to take responsibility for their own learning and areas for development. Through the use of retrieval practice at the start of every lesson, learners will identify strengths and weaknesses in their own understanding of content. They will experience scaffolding within many activities and make use of expert modelling within lessons. Students will experience more and more independent practice on activities throughout the year.				