

KS4 Chemistry curriculum plan

GCSE Topic order

Year 9 2020	Year 10 2021	Year 11 2022
C1	C3	C9
C2	C6	C4
C5	C7	
C13	C8	Triple
C14	C12	C10
		C11
		C15

Mock P2 combined

Year 10 2020	Year 11 2021
C13+14 recap	C6
C7	C4
C8	
C5	Triple
C9	C10
C12	C11
	C15

Mock P2 combined

Year 11 2020
C5/9 recap
C12
C6
C4
Triple
C10
C11
C15

Mock P2 combined

Topic outlines

Lesson	Unit	Lesson Topic	Assessment
C1.1	C1 Atomic structure	Atoms, elements and compounds	
C1.2		Mixtures	
C1.3		Atomic Structure	
C1.4		Electronic Structure	FAR electronic structures sheet – feedback and actions codes on the C1.5 lesson ppt.
C1.5		Isotopes	

Lesson	Unit	Lesson Topic	Assessment
C2.1	C2 The periodic table	The Modern periodic table	
C2.2		The Early periodic table	
C2.3		Metals and non-metals	FAR teacher marked C2.3 Starter exam question
C2.4		Group 0 Noble gases	
C2.5		Group 1	PA Exam Question (can be teacher marked if previous one missed)
C2.6		Group 7	
C2.7		Transition metals	
C2.8		Diagnosis and Therapy	
C2.9		Therapy and Test C1+C2	FAR marked test question with Feedback codes, Actions and Intervention codes
C2.10		Review and intervention	

Lesson	Unit	Lesson Topic	Assessment
C3.1	C3 Bonding	States of Matter	
C3.2		Ionic Bonding	
C3.3		Formulae of ionic compounds	
C3.4		Giant ionic structures	FAR marked exam question with feedback codes and actions
C3.5		Covalent Bonding	
C3.6		Types of covalent structure and properties	PA exam question (can be teacher assessed if previous one missed)
C3.7		Giant covalent structures	
C3.8		Fullerenes and Graphene	
C3.9		Metals	FAR marked 6 mark question on comparing metals
C3.10		Alloys	
C3.11T		TRIPLE ONLY Nanoscience	
C3.12		Diagnosis and Therapy	
C3.13		Therapy and Test C3	FAR marked test question with Feedback codes, Actions and Intervention codes
C3.14		Review and intervention	

Lesson	Unit	Lesson Topic	Assessment
C4.1	C4 Chemical calculations	Mass Conservation	
C4.2		Relative mass and moles	
C4.3H		Equations and calculations (Higher combined and triple only)	
C4.4H		From masses to balanced equations (Higher combined and triple only)	FAR marked exam question for Higher with feedback codes, actions and responses
C4.3F C4.5H C4.7T		Expressing concentrations	FAR marked exam question for C4.3Foundation with feedback codes, actions and responses
C4.5T		TRIPLE ONLY The Yield of a chemical reaction	
C4.6T		TRIPLE ONLY Atom economy	
C4.8T		TRIPLE ONLY Titrations	
C4.9T		TRIPLE ONLY Titration calculations (2/3 lessons including required practical)	Student self or peer assess exam questions in lab book
C4.10T		TRIPLE ONLY Volume of gases	Students self-assess exam question
C4.4F C4.6H C4.11T		Diagnosis and Therapy	
C4.6F C4.7H C4.12T		Therapy and Test C4	FAR marked test question with Feedback codes, Actions and Intervention codes
C4.7F C4.8H C4.13T		Review and intervention	

Lesson	Unit	Lesson Topic	Assessment
C5.1	C5 Chemical changes	Reactivity series	
C5.2		Displacement reactions	
C5.3		Extracting metals (this may take 2 lessons)	FAR marked exam question with feedback codes, actions and responses
C5.4		Salts and metals	
C5.5		Salts from insoluble bases – Required practical	
C5.6		Making more salts	Student self or peer assess exam questions in lab book
C5.7		Neutralisation and the pH scale	
C5.8		Diagnosis and Therapy	
C5.9		Therapy and Test	FAR marked test question with Feedback codes, Actions and Intervention codes
C5.10		Review and Intervention tasks	

Lesson	Unit	Lesson Topic	Assessment
C6.1	C6 Electrolysis	Introduction to Electrolysis	Students self-assess exam question
C6.2		Changes at the electrodes	
C6.3		Electrolysis of Aluminium	FAR marked exam question 6 marks with feedback codes, actions and responses
C6.4		Electrolysis of Brine	
C6.5		Required Practical	
C6.6		Required Practical	Student self or peer assess exam questions in lab book
C6.7		C6+7 Diagnosis test and revision (If C7 already taught)	
C6.8		C6+7 revision and test (If C7 already taught)	FAR marked test question with Feedback codes, Actions and Intervention codes
C6.9		C6+7 review and intervention (If C7 already taught)	

Lesson	Unit	Lesson Topic	Assessment
C7.1	C7 Energy changes	Exothermic and endothermic reactions	
C7.2		Required Practical – temperature change	Students self or peer assess lab book qs
C7.3		Reaction Profiles	
C7.4H		Bond making and breaking (higher tier)	FAR marked exam question C7.4 with feedback codes, actions and responses
C7.5T		TRIPLE ONLY Chemical cells and batteries	
C7.6T		TRIPLE ONLY Fuel cells	Student self or peer assess exam question
C7.4F C7.5H C7.7T		C6+7 Diagnosis test and revision (If C6 already taught)	
C7.5F C7.6H C7.8T		C6+7 revision and test (If C6 already taught)	FAR marked test question with Feedback codes, Actions and Intervention codes
C7.6F C7.7H C7.9T		C6+7 review and intervention (If C6 already taught)	

Lesson	Unit	Lesson Topic	Assessment
C8.1	C8 Rates of Reaction	Rate of reaction	
C8.2		Collision theory and Surface area	
C8.3		The effect of temperature	FAR assessment of practical – method, table, graph and conclusion with F and A
C8.4a C8.4b C8.4c		Required Practical – Concentration (3 lessons)	Student self or peer assess exam questions in lab book
C8.5		Catalysts	
C8.6		Reversible reactions and energy	
C8.7		Dynamic equilibrium	Students self-assess exam question
C8.8H		Higher only - Altering conditions	
C8.9		Diagnosis and therapy	
C8.10		Therapy and test	FAR marked test question with Feedback codes, Actions and Intervention codes
C8.11		Test review and intervention	

Lesson	Unit	Lesson Topic	Assessment
C9.1	C9 Crude oil and fuels	Hydrocarbons	
C9.2		Fractional distillation of oil	Students peer-assess exam question
C9.3		Burning hydrocarbon fuels	
C9.4		Cracking hydrocarbons	FAR marked exam question with feedback codes, actions and responses
C9.5		C9+12 Diagnosis and revision (done after topic 12 if topic 9 is before)	
C9.6		C9+12 Revision and test	FAR marked test question with Feedback codes, Actions and Intervention codes
C9.7		C9+12 Review and intervention	

Lesson	Unit	Lesson Topic	Assessment
C10.1T	C10	The reactions of alkenes	
C10.2T	Organic Chemistry (Triple)	Reactions and uses of Alcohols	FAR marked exam question with feedback codes, actions and responses
C10.3T		Carboxylic acids and esters	

Lesson	Unit	Lesson Topic	Assessment
C11.1T	C11 Polymers (Triple)	Addition and Condensation polymerisation	
C11.2T		Natural polymers and DNA	SA multiple choice quiz
C11.3T		C9-11 Diagnosis and revision	
C11.4T		C9-11 Revision and Test	FAR marked test question with Feedback codes, Actions and Intervention codes
C11.5T		C9-11 Review and intervention	

Lesson	Unit	Lesson Topic	Assessment
C12.1	C12 Chemical Analysis	Pure substances and mixtures	
C12.2a C12.2b		Chromatography (2 lessons) – Required practical	Student self or peer assess exam questions in lab book
C12.3		Tests for gases	
C12.4T		Testing for ions – Required Practical	
C12.5T		Testing for ions – Required Practical	Student self or peer assess exam questions in lab book
C12.6T		Instrumental analysis	
C12.7		C9+12 Diagnosis and revision (done after topic 9 if topic 12 is before)	
C12.8		C9+12 Revision and test	FAR marked test question with Feedback codes, Actions and Intervention codes
C12.9		C9+12 Review and intervention	

Lesson	Unit	Lesson Topic	Assessment
C13.1	C13 The Earth's Atmosphere	History of the atmosphere	
C13.2		Our evolving atmosphere	Students self-assess exam question
C13.3		Greenhouse gases	
C13.4		Global climate change	FAR marked exam question with feedback codes, actions and responses
C13.5		Atmospheric pollutants	

Lesson	Unit	Lesson Topic	Assessment
C14.1	C14 The Earth's resources	Finite and renewable resources	
C14.2		Water safe to drink	
C14.3		2 lessons – Required Practical Water Purification	Student self or peer assess exam questions in lab book
C14.4		Treating waste water	FAR marked exam question with feedback codes, actions and responses
C14.5H		Extracting metals from ores	
C14.6		Life Cycle assessments	
C14.7		Reduce, reuse, recycle	
C14.8		Diagnosis and revision	
C14.9		Revision and test	FAR marked test question with Feedback codes, Actions and Intervention codes
C14.10		Review and intervention	

Lesson	Unit	Lesson Topic	Assessment
C15.1T	C15 Using our resources	Rusting and useful alloys	Students self-assess exam question
C15.2T		The properties of polymers, glass, ceramics and composites (computer lesson)	
C15.3T		The Haber process	FAR marked exam question 6 marks with feedback codes, actions and responses
C15.4T		Making fertilisers	Students self-assess exam question