

Chemistry 1st Year Scheme of Work 2025-26

w/b	Content	Test	Practical
Sep 8 th	Course introduction and lab rules 2.1.1 Atomic structure and isotopes 2.1.1 Relative atomic masses		1. Magnesium silicide
Sep 15 th	2.1.2 Compounds, formulae, and equations 2.1.3 Amount of substance: the mole	0. Induction test	
Sep 22 nd	2.1.3 Determining empirical and molecular formulae 2.1.3 Water of crystallisation		2. Finding the formula of copper oxide (preparation for practical 3)
Sep 29 th	2.1.3 Calculations involving: masses, concentrations, and volumes of gases 2.1.3 Volumes and concentrations of solutions	1. Atomic structure & ½ moles	3. ASSESSED PRACTICAL: PAG 1 Determination of the formula for magnesium oxide
Oct 6 th	2.1.3 Ideal gases		4. Finding the value of x in the formula: CuSO ₄ .xH ₂ O
Oct 13 th	2.1.3 Percentage yield and atom economy		5. Finding the relative atomic of an unknown metal
Oct 20 th	2.1.4 Acids and bases 2.1.4 Acid-base titrations	2. Full moles	6a. Preparing a standard solution
Autumn ½ term: Oct 27 th – Oct 31 st			
Nov 3 rd	2.1.5 REDOX: oxidation numbers and redox reactions		6b. Determination of concentration of HCl (preparation for practical 7)
Nov 10 th	2.2.1 Electronic structure: energy levels, shells, sub-shells, atomic orbitals, electron configurations		7. ASSESSED PRACTICAL: PAG 2 Identification of an unknown carbonate
Nov 17 th	2.2.2 Bonding and structure: ionic, covalent, dative covalent 2.2.2 Shapes of molecules and ions	3. Acids, bases & electrons	
Nov 24 th	2.2.2 Electronegativity and bond polarity 2.2.2 Intermolecular forces		
Dec 1 st	3.1.1 Periodicity: trends in electron configuration and ionization energy		
Dec 8 th	3.1.1 Periodic trends in structure and melting point	4. Bonding, shape & intermolecular forces	
Dec 15 th	3.1.2 Group 2	5. Periodicity	9. Group 2
Christmas holidays: Dec 18 th – Jan 2 nd			
Jan 5 th	3.1.3 Group 7 3.1.4 Qualitative analysis: tests for ions		10. Group 7: The halogens 11. Group 7: The halides 12a. Demo: Qualitative analysis (preparation for 12b)
Jan 12 th	3.1.4 Qualitative analysis: tests for ions	6. Group 2 and Group 7	12b. ASSESSED PRACTICAL PAG 4 Identifying unknowns
Jan 19 th	3.2.1 Enthalpy changes: endothermic/exothermic reactions, activation energy, enthalpy change definitions		
Jan 26 th	3.2.1 Enthalpy changes: calculations involving experimental data 3.2.1 Enthalpy changes: calculations involving bond enthalpies		13. Enthalpy change of combustion 14. Determination of enthalpy change of neutralisation
Feb 2 nd	3.2.1 Enthalpy changes: calculations involving Hess cycles	Mid-year exam	15. ASSESSED PRACTICAL PAG 3 Determination of an enthalpy change by Hess' Law
Feb 9 th	3.2.2 Reaction rates: calculating rate, catalysis, Boltzmann distribution	7. Enthalpy changes	16. Rate of reaction of CaCO ₃ and HCl
Spring ½ term: Feb 16 th – Feb 20 th			
Feb 23 rd	3.2.3 Chemical equilibria: Le Chatelier's principle, effect of catalyst, K _c		17. To illustrate Le Chatelier's Principle
Mar 2 nd	4.1.1 Organic Chemistry: basic concepts, functional groups, nomenclature 4.1.1 Structural isomerism	8. Rates and equilibrium	
Mar 9 th	4.1.2 Alkanes, radical substitution		
Mar 16 th	4.1.3 Alkenes, stereoisomerism, electrophilic addition	9. Basic concepts and alkanes	18. Alkanes and alkenes
Mar 23 rd	4.1.3 Addition polymerization, other reactions of alkenes		
Easter holidays: Mar 30 th – Apr 10 th			
Apr 13 th	4.2.1 Alcohols: properties and reactions	10. Alkenes	19a. Reactions of alcohols
Apr 20 th	4.2.2 Haloalkanes	11. Alcohols	19. Oxidation of ethanol (preparation for practical 20) 21. Hydrolysis of haloalkanes
Apr 27 th	4.2.4 Analytical techniques: infrared spectroscopy, mass spectrometry, combined techniques		20. ASSESSED PRACICAL PAG 5 Preparation of cyclohexene
May 4 th	Past papers	12. Haloalkanes and analysis	
May 11 th	1 st year study leave starts	Study leave	
May 18 th	Transfer exam: 2 hours 15 mins, covering all Year 1 content.		
Summer ½ term: May 25 th – May 29 th			