Chemistry 1st Year Scheme of Work 2025-26

w/b	Content – teacher 1 (double lesson)	Test – teacher 1 (double lesson)	Practical – teacher 1 (double lesson)	Content – teacher 2 (single lessons)	Test – teacher 2 (single lessons)	Practical – teacher 2 (single lessons)
Sep	Course introduction and lab rules	(1. Magnesium silicide	2.1.1 Relative atomic masses 2.1.2 Compounds,	(emgeresser)	(emg.e recently
8 th	2.1.1 Atomic structure and isotopes			formulae		
Sep 15 th	2.1.2 Balancing equations	0. Induction test		2.1.5 REDOX: oxidation numbers and redox reactions		
Sept 22 nd	2.1.3 Amount of substance: the mole 2.1.3 Determining empirical and molecular formulae			2.2.1 Electronic structure: energy levels, shells, subshells, atomic orbitals, electron configurations		
Sept 29 th	2.1.3 Water of crystallisation		2. Finding the formula of copper oxide (preparation for practical 3)	2.2.2 Bonding and structure: ionic, covalent, dative covalent		
Oct 6 th	2.1.3 Reacting mass calculations		3. ASSESSED PRACTICAL: PAG 1 Determination of the formula for magnesium oxide	2.2.2 Bonding and structure: ionic, covalent, dative covalent		
Oct 13 th		1. Atomic structure & ½ moles	4. Finding the value of x in the formula: CuSO ₄ .xH ₂ O	2.2.2 Shapes of molecules and ions		
Oct 20 th	2.1.3 Volumes of gases		5. Finding the relative atomic of an unknown metal	2.2.2 Electronegativity and bond polarity		
			Autumn ½ term: Oc	t 27 th – Oct 31 st		
Nov 3 rd	2.1.3 Volumes and concentrations of solutions			2.2.2 Intermolecular forces		
Nov 10 th	2.1.3 Ideal gases			3.1.1 Periodicity: trends in electron configuration and ionization energy	4. Bonding, shape & intermolecular forces	
Nov 17 th	2.1.3 Percentage yield and atom economy 2.1.4 Acids and bases			3.1.1 Periodic trends in structure and melting point		
Nov 24 th	2.1.4 Acid-base titrations		[Reactions of acids]	3.1.1 Periodic trends in structure and melting point		
Dec 1 st	2.1.4 Acid-base titrations	2. Full moles	6a. Preparing a standard solution	3.1.2 Group 2		9. Group 2
Dec 8 th			6b. Determination of concentration of HCI (preparation for practical 7)	3.1.3 Group 7 properties & displacement reactions	5. Periodicity	
Dec 15 th			7. ASSESSED PRACTICAL: PAG 2 Identification of an unknown carbonate	3.1.3 Group 7 uses & disproportionation		10. Group 7: The halogens
			Christmas holidays: D			11.0 ==:
Jan 5 th	4.1.1 Organic Chemistry: basic concepts	3. Acids, bases & electrons		3.1.4 Qualitative analysis: tests for halide ions		11. Group 7: The halides
Jan 12 th	4.1.1 Organic Chemistry:			3.1.4 Qualitative analysis: tests for ions		12a. Demo: Qualitative analysis (preparation for 12b)

	functional groups,					
Jan 19 th	4.1.1 Structural isomerism			3.2.1 Enthalpy changes: endothermic/exoth ermic reactions, activation energy, enthalpy change definitions		12b. ASSESSED PRACTICAL PAG 4 Identifying unknowns
Jan 26 th				3.2.1 Enthalpy changes: calculations involving experimental data	6. Group 2 and Group 7	
Feb 2 nd	4.1.2 Alkanes, combustion and radical substitution	Mid-year exam	18. Alkanes and alkenes			13. Enthalpy change of combustion
Feb 9 th	4.1.3 Alkenes, stereoisomerism			3.2.1 Enthalpy changes: calculations involving bond enthalpies		14. Determination of enthalpy change of neutralisation
	<u>'</u>	<u> </u>	Spring ½ term: Fe		<u>'</u>	<u>'</u>
Feb 23 rd	4.1.3 Alkenes: electrophilic addition			3.2.1 Enthalpy changes: calculations involving Hess cycles		
Mar 2 nd	4.1.3 Alkenes: other reactions (hydration, hydrogenation)	9. Basic concepts and alkanes		3.2.2 Reaction rates: collision theory & measuring rate		15. ASSESSED PRACTICAL PAG 3 Determination of an enthalpy change by Hess' Law
Mar 9 th	4.1.3 Addition polymerization			3.2.2 Reaction rates: catalysis	7. Enthalpy changes	
Mar 16 th	4.2.1 Alcohols: properties, classification and oxidation			3.2.2 Reaction rates: Boltzmann distribution		16. Rate of reaction of CaCO₃ and HCl
Mar 23 rd	4.2.1 Alcohols: oxidation	10. Alkenes	19a. Reactions of alcohols	3.2.3 Chemical equilibria: Le Chatelier's principle		
	1		Easter holidays: M			<u> </u>
Apr 13 th	4.2.1 Alcohols: other reactions (elimination, substitution)		19. Oxidation of ethanol (preparation for practical 20)	3.2.3 Chemical equilibria: Le Chatelier's principle		17. To illustrate Le Chatelier's Principle
Apr 20 th				3.2.3 Chemical equilibria: K₅	8. Rates and equilibrium	
Apr 27 th	4.2.2 Haloalkanes	11. Alcohols	21. Hydrolysis of haloalkanes	4.2.4 Analytical techniques: infrared spectroscopy, mass spectrometry,		
May 4 th	4.2.2 Haloalkanes	12. Haloalkanes and analysis (Next term!)	20. ASSESSED PRACICAL PAG 5 Preparation of cyclohexene	4.2.4 Combined techniques		
May 11 th						
May 18 th		Tı		udy leave mins, covering all Year 1 co	ntent.	
-	1		Summer ½ term: M			