

1.15 Programme Planner

Class/Term	Topic	Sub-topic	Periods	
Senior Five Term 1	1. Moles and Equations	1.1	Masses of atoms and molecules, accurate relative atomic masses	09
		1.2	Amount of substance, mole calculations	12
		1.3	Chemical formulae and chemical equations	09
		1.4	Solutions and concentration, calculations involving gas volumes	21
	2. Atomic and Electronic Structure	2.1	Electron configurations of atoms and ions	12
		2.2	Radioactivity and its applications	15
	3. Bonding and Structure	3.1	Formation of ionic and metallic bonds	12
		3.2	Covalent bonds and molecular structures	18
	Total			108

Class/ Term	Topic	Sub-topic	Periods	
Senior Five Term 2	4. Periodicity I	4.1	The Periodic Table	06
		4.2	Variation in trends of properties across periods and the diagonal relationships	18
		4.3	Trends in properties of Group 2 elements	09
	5. Thermochemistry	5.1	Enthalpy changes and energy profiles	15
		5.2	Types of enthalpy changes and Hess's law	15
		5.3	Born-Haber cycles and lattice energy	15
	6. Organic Chemistry I	6.1	Introduction to organic compounds	15
		6.2	Alkanes, alkenes, alkynes	15
	Total			108

Class/ Term	Topic	Sub-topic		Periods
Senior Five Term 3		6.3	Halogen compounds (Alkyl halides)	12
		6.4	Benzene and methyl benzene	15
	7. Equilibria I	7.1	The concept of chemical equilibrium	18
		7.2	Equilibria and the chemical industry	15
		7.3	Ionic equilibrium, hydrolysis of salts and buffer solutions	30
		7.4	Solubility equilibria	18
Total				108

Class/Term	Topic	Sub-Topic		Periods
Senior Six Term 1	8. Equilibria II	8.1	Physical equilibria	27
		8.2	Colligative properties	18
	9. Organic Chemistry II	9.1	Alcohols and phenols	24
		9.2	Carbonyl compounds (aldehydes and ketones)	24
		9.3	Carboxylic acids and derivatives	15
Total				108

Class/ Term	Topic	Sub-topic		Periods
Senior Six Term 2	10. Electrochemistry	10.1	Redox reactions and oxidation numbers	18
		10.2	Electrochemical cells and applications	21
		10.3	Electrolysis and Faraday's laws	15
	11. Periodicity II	11.1	Trends in chemical properties of Group 14 elements and their compounds	15
		11.2	Trends in properties of Group 17 elements and their compounds	15
		11.3	The d-block transition elements	24
Total				108

Class/ Term	Topic	Sub-Topic		Periods
Senior Six Term 3	12. Organic Chemistry III	12.1	Amines	18
		12.2	Polymers and polymerisation	18
	13. Reaction Kinetics	13.1	Rate equations and orders of reaction	18
		13.2	Factors affecting rates of reactions	18
Total				72