

	Year 12 teacher 1	Year 12 teacher 2	Year 13 teacher 1	Year 13 teacher 2
Autumn half term 1 Sequential knowledge and skills	<p><u>Atomic structure</u> _fundamental particles the arrangement of electrons and mass spectrometry</p> <p><u>Bonding</u> describe the bonding in inorganic and covalent materials, explain the intermolecular forces between molecules and deduce the shapes of molecules</p>	<p><u>Amount of substance</u></p> <p>Develop competence in calculations involving moles in solids, liquids, and gases</p>	<p><u>Acids bases and buffers</u></p> <p>Definition of an acid, the pH scale weak acids and bases, calculation of the pH of a range of solutions</p> <p><u>Carbonyls and chirality</u></p> <p>Reactions of aldehydes and ketones to produce optically active compounds</p>	<p><u>Kinetics</u></p> <p>Arrhenius equation and the rate determining step</p> <p><u>Equilibria constant Kp</u></p> <p>Equilibrium constant Kp for homogeneous systems</p>
Assessment Content and methods used to judge learning	1 hour paper to cover topics taught by both teachers	1 hour paper to cover topics taught by both teachers	1 hour paper to cover topics taught by both teachers	1 hour paper to cover topics taught by both teachers
Autumn half term 2 Sequential knowledge and skills	<p><u>Energetics</u></p> <p>Measure and calculate enthalpy, use standard enthalpy's in Hess's law calculations, be able to draw enthalpy cycles.</p> <p><u>Kinetics</u></p> <p>Collision theory and the Maxwell Boltzmann distribution</p>	<p><u>Introduction to organic chemistry</u></p> <p>Nomenclature and isomerism</p> <p><u>Alkanes</u></p> <p>Fractional distillation, cracking and combustion. Formation of halogenoalkanes</p>	<p><u>Amines</u></p> <p>Naming amines, determining base strength based on structure, preparation of amines</p> <p><u>Aromatic chemistry</u></p> <p>Structure and bonding in benzene Electrophilic substitution of benzene with acyl chloride and acid anhydrides</p> <p><u>Polymerization</u></p> <p><u>Identify polymers asadiiton and</u></p>	<p><u>Thermodynamics</u></p> <p>Enthalpy changes and born haber cycles. Gibbs free energy</p>
Assessment Content and methods used to judge learning	AS mock paper 1.5 hours To contain all topics covered		Two papers Paper 1, 2 hours organic and physical long answer questions	

				Paper 2, long answer questions on practical's multiple choice from all areas of the spec.
Spring half term 3 Sequential knowledge and skills	<p><u>Equilibria</u></p> <p>Changing the conditions in an equilibrium reaction The equilibrium constant Kc calculations involving Kc</p> <p><u>Oxidation, reduction and redox reactions</u></p> <p>Oxidation states, redox equations</p>	<p><u>Halogenoalkanes</u></p> <p>Nucleophilic substitution and elimination</p> <p><u>Alkenes</u></p> <p>Electrophilic addition and addition polymers</p>	<p><u>Amino acids, proteins and DNA</u></p> <p>Structure and naming of amino acids, making peptides and proteins, enzymes DNA and the action of anti-cancer drugs</p> <p><u>Structure determination</u></p> <p>NMR spectroscopy and combined spectral techniques</p> <p><u>Chromatography</u></p> <p>Understand mobile and stationary phases and apply that to paper, TLC column and GLC</p>	<p><u>Electrode potentials and Electrochemical cells</u></p> <p>The electrochemical series, predicting the direction of the redox reactions</p>
Assessment Content and methods used to judge learning	1 hour paper to cover topics taught by both teachers	1 hour paper to cover topics taught by both teachers	1 hour paper to cover topics taught by both teachers	1 hour paper to cover topics taught by both teachers
Spring half term 4 Sequential knowledge and skills	<p><u>Periodicity</u></p> <p>Trends in the properties of elements on period 3</p> <p><u>Group 2 the alkaline earths</u></p> <p>The physical and chemical properties of group 2</p>	<p><u>Alcohols</u></p> <p>Production of ethanol and reaction of alcohols, use of the quick fit apparatus</p> <p><u>Organic analysis</u></p> <p>Test tube reactions, mass spectrometry and infra-red.</p>		

Assessment Content and methods used to judge learning	1 hour paper to cover topics taught by both teachers	1 hour paper to cover topics taught by both teachers	All pupils to sit three papers in real time	
Summer half term 5 Sequential knowledge and skills	<u>Group 7</u> The physical and chemical properties of group 7	<u>Review of the PAGs</u> Revision and coaching for the end of year exam	Targeted revision based on the performance in the assessment's before Easter.	
Assessment Content and methods used to judge learning	Optional AS exam All students to sit internal exam		A level exams	
Summer half term 6 Sequential knowledge and skills	<u>Acids and bases</u> Definition of an acid, the pH scale weak acids and bases, calculation of the pH of a range of solutions	<u>Kinetics</u> Rate of reaction determination of order		
Assessment Content and methods used to judge learning Assessment	Question booklets on the 13 topics covered at the end of the year	Question booklets on the 13 topics covered at the end of the year		