



Chemistry: Curriculum Overview
Year 13

Term	Teacher 1			Teacher 2			Wider reading:
	Topic studied	What will I learn?	How will I be assessed?	Topic studied	What will I learn?	How will I be assessed?	
Year 13 Autumn	Organic Chemistry	Optical isomerism. Aldehydes and ketones Carboxylic acid and derivatives Acid anhydrides, acyl chlorides and amides. Aromatic chemistry Amines	End of topic tests after each topic	Acids and bases	Hydrogen ions and pH, Bronsted-Lowry base equilibria. Ionic product of water. Weak acids and bases. pH curves, titrations and indicators. Buffer solutions	End of topic test	Use textbook and revision guide provided. Chemguide.co.uk RSC.co.uk
				Rate equations	Rate equation. Order of reaction is and mechanism of a reaction	End of topic test	
Year 13 Spring	Organic Chemistry (cont)	Polymers Amino acids, proteins and DNA. Organic synthesis. Analysis methods	End of topic test	Electrode potentials and electrochemical cells	Half-equations. Cells, the standard hydrogen electrode. The electrochemical series. Commercial applications of electrochemical cells. Fuel cells are how they generate electricity. The electrode reactions in an alkaline hydrogen-oxygen fuel cell. The benefits and risks associated with using these cells.	End of topic test	
	Transition metals	General properties, what a complex is, a ligand, different types of ligands and what the coordination number is. Ligand substitution reactions. Shapes of complexes. Formation of coloured ions, how these arise and the factors that influence the colour.	End of topic test		End of topic test		
Year 13 Summer	Transition metals (cont)	Variable oxidation states. Heterogeneous and homogeneous catalysts. Reactions of ions in aqueous solutions.	End of topic test	Thermodynamics	Born-Haber cycles. The concept of increasing disorder Entropy. Gibbs free energy	End of topic test	
	Periodicity	Properties of period 3 elements and their oxides.	End of topic test				