

UoB School Subject Curriculum Outline – CHEMISTRY 2016/17

	Term 1a	Term 1b	Term 2a	Term 2b	Term 3a	Term 3b
Y7	<p>Apparatus <i>Naming important apparatus, using Bunsen Burners, heating chemicals, na</i></p> <p>Safety <i>Lab safety, hazard symbols</i></p> <p>Particles <i>Particle model of Solids liquids and gases</i></p>	<p>Particles <i>Changes of state</i></p>	<p>Elements and atoms <i>The periodic table, names and symbols of elements, names and symbols of groups</i></p> <p>Compounds <i>Particle model of elements, compounds, molecules and mixtures</i></p>	<p>Compounds and Reactions <i>How to make scientific observations in reactions</i></p>	<p>Separation Techniques <i>Definition of a mixture. Chromatography, filtration, evaporation, distillation</i></p>	<p>Acids and Bases <i>Properties of acids and alkalis, pH scale, different types of indicators, neutralisation reactions and equations</i></p>
Y8	<p>Continue with Acids and bases <i>Properties of acids and alkalis, pH scale, different types of indicators, neutralisation reactions and equations</i></p>	<p>Metals <i>properties, reactivity series & displacement reactions, reactions with water and acids, alkali metal reactivity, extraction of metals</i></p>	<p>Metals and more reactions <i>endothermic and exothermic reactions; conservation of mass. Introducing formulae and balancing equations</i></p>	<p>Equations and formulae <i>Balancing equations, formulae of ionic compounds, formulae of simple covalent compounds</i></p>	<p>The Earth and The Earth's atmosphere <i>Link to GCSE content – evolution of the atmosphere, greenhouse effect, air pollution & acid rain, potable water</i></p>	<p>The Earth and The Earth's atmosphere <i>Link to GCSE content – evolution of the atmosphere, greenhouse effect, air pollution & acid rain, potable water</i></p>
Y9	<p>Atomic Structure 4.1.1 <i>Atomic model, development of atomic model, electronic structure of first 20 elements. (Not 4.1.2 Periodic Table)</i></p>	<p>Bonding 4.2.1 (and relevant sections from 4.2.2) <i>Ionic bonding & properties, covalent bonding & properties, metallic bonding & properties</i></p>	<p>Bonding 4.2.1 (and relevant sections from 4.2.2) <i>Ionic bonding & properties, covalent bonding & properties, metallic bonding & properties</i></p>	<p>Salt Preparations 4.4.2 (+ Required Practical) <i>Acid + metal, neutralisation of acid, crystallisation of soluble salts,</i></p>	<p>Salt preparations 4.4.2 <i>Acid + metal, neutralisation of acid, crystallisation of soluble salts</i></p> <p>Ion Tests 4.8.3 <i>Flame tests for metal ions, hydroxides, carbonates, halides, sulfates, instrumental methods and flame emission spectroscopy</i></p>	<p>Ion Tests (+ Required Practical) <i>Flame tests for metal ions, hydroxides, carbonates, halides, sulfates, instrumental methods and flame emission spectroscopy</i></p>
Y10						
Y11						
Y12	<p>Amount of substance; Introduction to organic chemistry; Atomic structure;</p>	<p>Alkanes; Haloalkanes; Redox; Periodicity;</p>	<p>Alkenes; Alcohols; Group 7; Energetics</p>	<p>Organic analysis; Kinetics; Equilibria</p>	<p>Revision and exams</p>	<p>Optical isomerism Kp Start rate equations NMR</p>

	Bonding	Group 2		*finish AS teaching		
Y13	Aldehydes and ketones; Carboxylic acids and derivatives; Redox equilibria?? Rate equations;	Chromatography; Aromatic chemistry; Thermodynamics	Amines; Amino acids, proteins and DNA; Acids and bases	Polymers; Organic synthesis; Transition metals; Reactions of ions in solution *finish A level teaching	Revision and exams	