



			<p><a href="#">Organic-II Detailed 3.07. Optical Isomers (physicsandmathstutor.com)</a></p> <p><a href="#">Organic-II Detailed 3.08. Aldehydes and Ketones (physicsandmathstutor.com)</a></p> <p><a href="#">Organic-II Detailed 3.09. Carboxylic Acids and Esters (physicsandmathstutor.com)</a></p>		<p>and reactions are addressed with applications of carbonyls, the use of benzene, amines, biomolecules and leading to synthetic pathways, linking together all organic reactions and mechanisms into a concept map.</p>
HT2		<p><b>3.1.9 Rate equations</b> 3.1.9.1 3.1.9.2</p> <p><b>3.1.10 Equilibrium constant K<sub>p</sub> for homogeneous systems</b></p> <p><b>3.3.9 Carboxylic acids and derivatives</b> 3.3.9.2</p> <p><b>3.3.10 Aromatic chemistry</b></p>	<p>Rate equations Determination of rate equation</p> <p>Equilibrium constant K<sub>p</sub> for homogeneous systems</p> <p><b>Acylation</b></p> <p><b>Benzene</b> Bonding Electrophilic substitution</p>	<p><b>Formative Assessment:</b> Daily, Weekly and Monthly Reviews focussing on reviewing material on Essential Knowledge.</p> <p>Use of TLaC techniques in lessons to check pupil understanding of essential knowledge during each lesson.</p> <p><b>Summative Assessment:</b> Cumulative assessment covers all topics studied up to this point. Mock exam assessment taken in the hall in exam conditions.</p> <p>AS Chemistry paper 1 and 2 taken, with 30 additional marks for each paper from the following topics: Thermodynamics Optical isomerism Carbonyls Derivatives of carboxylic acids.</p>	<p>Following this, identification of organic molecules with NMR, chromatography, and mass spectroscopy.</p> <p>Finally, the students cover transition metal chemistry, applying their knowledge and understanding of bonding and the formation of colours to explain the properties of transition metals and their uses.</p>

		3.3.10.1 3.3.10.2  <b>3.3.11 Amines</b> 3.3.11.1 3.3.11.2 3.3.11.3 3.3.12.1 3.3.12.2	<b>Amines</b> Preparation Base properties Nucleophilic properties Condensation polymers Biodegradability and disposal of polymers  <i><b>Reading for consolidation:</b></i> <a href="#">Physical-II Detailed 1.09. Rate Equations</a> <a href="#">(physicsandmathstutor.com)</a>  <a href="#">Physical-II Detailed 1.10. The Equilibrium Constant</a> <a href="#">(physicsandmathstutor.com)</a>  <a href="#">Organic-II Detailed 3.09. Carboxylic Acids and Esters</a> <a href="#">(physicsandmathstutor.com)</a>  <a href="#">Organic-II Detailed 3.10. Aromatic Chemistry</a> <a href="#">(physicsandmathstutor.com)</a>  <a href="#">Organic-II Detailed 3.11. Amines</a> <a href="#">(physicsandmathstutor.com)</a>		
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	<p><b>Transition metals</b></p>	<p><b>Period 3 elements and their oxides</b></p> <p><b>3.2.5 Transition metals</b></p> <p>3.2.5.1</p> <p>3.2.5.2</p> <p>3.2.5.3</p>	<p>Properties of Period 3 elements and their oxides</p> <p><b>Transition metals</b></p> <p>General properties of transition metals</p> <p>Substitution reactions</p> <p>Shapes of complex ions</p> <p><b>Reading for consolidation:</b></p> <p><a href="#">Physical-II Detailed 1.12. Acids and Bases</a> (<a href="http://physicsandmathstutor.com">physicsandmathstutor.com</a>)</p> <p><a href="#">Inorganic-II Detailed 2.4. Period 3 Elements</a> (<a href="http://physicsandmathstutor.com">physicsandmathstutor.com</a>)</p> <p><a href="#">Inorganic-II Detailed 2.5. Transition Metals</a> (<a href="http://physicsandmathstutor.com">physicsandmathstutor.com</a>)</p> <p><a href="#">Organic-II Detailed 3.16. Chromatography</a> (<a href="http://physicsandmathstutor.com">physicsandmathstutor.com</a>)</p> <p><b>Reading for breadth:</b></p> <p><a href="#">Separation techniques: Chromatography - PMC</a> (<a href="http://nih.gov">nih.gov</a>)</p>	<p>Mock exam assessment taken in the hall in exam conditions. All topics assessed.</p> <p>A Level Chemistry past papers (paper 1, 2 and 3) used along with associated grade boundaries. Some content removed on untaught content.</p>	
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HT5	<p>Acids and bases</p> <p>Transition Metals</p> <p>Aqueous solutions</p>	<p><b>3.1.12 Acids and bases</b> 3.1.12.6</p> <p><b>3.2.5 Transition metals</b> 3.2.5.4 3.2.5.5 3.2.5.6</p> <p><b>3.2.6 Reactions of ions in aqueous solution</b></p>	<p><b>Acids and bases</b> Buffer action</p> <p><b>Transition metals</b> Formation of coloured ions Variable oxidation states Catalysts</p> <p><b>Aqueous ions</b> Reactions of ions in aqueous solution</p> <p><b>Reading for consolidation:</b> <a href="http://physicsandmathstutor.com">Physical-II Detailed 1.12. Acids and Bases (physicsandmathstutor.com)</a></p> <p><a href="http://physicsandmathstutor.com">Inorganic-II Detailed 2.5. Transition Metals (physicsandmathstutor.com)</a></p> <p><a href="http://physicsandmathstutor.com">Inorganic-II Detailed 2.6. Reaction of Metal Aqua Ions (physicsandmathstutor.com)</a></p>	<p><b>Formative Assessment:</b> Daily, Weekly and Monthly Reviews focussing on reviewing material on Essential Knowledge.</p> <p>Use of TLaC techniques in lessons to check pupil understanding of essential knowledge during each lesson.</p> <p><b>Summative Assessment:</b> Cumulative assessment is taken in class and covers all topics studied up to this point.</p>	
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