

Subject	Year	Term
Chemistry	12	5
Topic		
4.2.3 Practical skills and synthesis		
Content (Intent)		
Prior Learning (Topic) 4.1.3 Alkenes, 4.2.1 Alcohols, 4.2.2. Haloalkanes,		
<p>Practical skills</p> <p>(a) the techniques and procedures for:</p> <p>(i) use of Quick fit apparatus including for distillation and heating under reflux</p> <p>(ii) preparation and purification of an organic liquid including:</p> <ul style="list-style-type: none"> • use of a separating funnel to remove an organic layer from an aqueous layer • drying with an anhydrous salt (e.g. MgSO₄, CaCl₂) • distillation <p>Synthetic routes</p> <p>(b) for an organic molecule containing several functional groups:</p> <p>(i) identification of individual functional groups</p> <p>(ii) prediction of properties and reactions</p> <p>(c) two-stage synthetic routes for preparing organic compounds.</p>		
Future Learning (Topic) 6.2.5 Organic synthesis		
How will knowledge and skills be taught? (Implementation)	How will your understanding be assessed & recorded (Impact)	
<p><i>Practical work</i></p> <p>PAG 5.1 Synthesis of a haloalkane</p> <p>PAG 5.3 Oxidation of ethanol</p> <p>OCR activity 2 reaction of carbonyls with 2,4- DNP</p> <p><i>Written</i></p> <p>Overview of all organic reactions</p>	<p>- exam questions in lessons and homework</p> <p>- 1 x standard homework on practical skills (grade given. Written feedback. Verbal feedback to the class and individuals).</p>	
How can parents help at home?		
<p>Look at the topic specific resources on the VLE</p> <p>Use appropriate websites: MachemGuy, Allery Chemistry, Chemistry World – by Royal Society of Chemistry, ChemGuide.</p> <p>Take an interest! Ask your children what they have learnt and be curious about their learning.</p>		
Helpful further reading/discussion		
<p>Reading</p> <p>The Science of Everyday Life by Marty Jopson</p> <p>Why Chemical Reactions Happen by Keeler and Wothers</p>	<p>Vocabulary Lists</p> <p>Quick Fit</p> <p>Reflux</p> <p>Distillation</p> <p>Separating funnel</p> <p>Anhydrous</p>	<p>Careers Links</p> <p>Analytical chemist</p> <p>Chemical engineer</p> <p>Clinical biochemist</p> <p>Forensic scientist</p> <p>Pharmacologist</p> <p>Process chemist</p>

Chapter 16 of A level chemistry for OCR	Filtration under reduced pressure Buchner funnel Synthesis	Quality control analyst Research scientist Science writer Site chemist Teacher or lecturer Degrees; Chemistry Biochemistry Biomedical science Biological sciences Medicine Research chemist Veterinary medicine
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