

Curriculum Map: KS4 Chemistry Year 11

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Content Declarative knowledge 'I Know'</p>	<p>Topic: C7 Organic Chemistry Define the keywords: Hydrocarbon, Crude oil, Alkane, Fractional distillation, Cracking, combustion.</p> <p>Know the structure of Alkanes (first 4) and the general formula.</p> <p>AS ABOVE Plus... Define Alkene, alcohols, carboxylic acids, functional group, homologous series, polymer, monomer, condensation polymerisation, addition polymerisation, amino acid, DNA.</p> <p>Know the structure of Alkenes (first 4) and the general formula. Know the structure of Alcohols (first 4) and the general formula.</p> <p>Know main uses of alcohols. Know reactions of alcohol. Know the main reactions of carboxylic acids.</p>					
<p>Skills Procedural Knowledge 'I know how to'</p>	<p>Know how to explain how crude oil is separated via fractional distillation. Know how to explain the fractional distillation process. Know how to write balanced combustion equations and cracking equations. Know how to explain the trends in properties of the hydrocarbons (Boiling points, viscosity, flammability) Know how to test for the presence of alkenes. Know how to draw displayed formulae for alkenes and products of addition reactions and carboxylic acids</p> <p>Know how to draw polymers from an alkene.</p>					
<p>Strategies</p>	<p>Evaluate the fractions for different purposes based on their physical properties.</p>					

<p>Conditional Knowledge 'I know when to'</p>	<p>Deduce via which route a polymer has been made. Evaluate a molecule and determine its functional group and reactions from its structure.</p>				
<p>Key Questions</p>	<p>What is crude oil, how is it useful and how can we separate the fractions? How does cracking hydrocarbons allow supply to meet demand? What are polymers? How are they made and why are they useful?</p>				
<p>Assessment topics</p>	<p>End of Topic C7 Test PPEs</p>				
<p>Cross curricular links/Character Education</p>	<p>Maths – Algebra in general formula Food Tech – Fermentation of sugar to make alcohol</p>				