



## Y11 Science– Organic Chemistry – Spring Term - Knowledge Overview

Year group:	Unit:	Date (from and to):	Resources	
Week beginning:	Big question / concept:	Learning intentions:	Offline:	Online including links on how to access these:
4 <sup>th</sup> January 2021	What is crude oil?	<p><b>You should be able to:</b></p> <p><b>Describe</b> the formation of crude oil.</p> <p><b>Describe</b> the composition of crude oil.</p> <p>Define a hydrocarbon.</p> <p><b>State</b> the names and formula of the first 4 alkanes</p> <p><b>Draw</b> the covalent bonding in:</p> <ul style="list-style-type: none"><li>• methane</li><li>• ethane</li><li>• propane</li><li>• butane.</li></ul> <p><b>Explain</b> what is meant by the formula <math>C_nH_{2n+2}</math></p>	<p>Read and make notes on page 4 on the organic chemistry pack.</p> <p>Read and make notes on page 5 of the organic chemistry pack.</p> <p>Complete exam question on page 6</p> <p>Mark answer on page 7</p>	<p>Lesson on crude oil and alkanes <a href="https://classroom.thenational.academy/lessons/photosynthesis-cnj36r">https://classroom.thenational.academy/lessons/photosynthesis-cnj36r</a></p> <p>GCSE Pod video on: Alkanes. Watch video 3 <a href="https://members.gcsepod.com/shared/podcasts/title/10869/66732">https://members.gcsepod.com/shared/podcasts/title/10869/66732</a></p>

<p>11<sup>th</sup> January 2020</p>	<p>Separation of crude oil</p>	<p><b><u>You should be able to:</u></b></p> <p><b>Describe</b> the process of fractional distillation.</p> <p><b>Explain</b> the process of fractional distillation in terms of intermolecular forces of attraction.</p> <p><b>Suggest</b> the impact on fuels, feedstocks and petrochemicals of the depleting stocks of crude oil.</p>	<p>Read and make notes from 9-14. you must summarise all the key information from all the slides.</p> <p>Complete exam question on pages 15 -18</p> <p>Mark answer on page 19-21</p>	<p>Lesson on fractional distillation <a href="https://classroom.thenational.academy/lessons/fractional-distillation-69k38t?activity=video&amp;step=1">https://classroom.thenational.academy/lessons/fractional-distillation-69k38t?activity=video&amp;step=1</a></p> <p>GCSE Pod video on: Fuels and feedstocks. Watch video 1 and 2 <a href="https://members.gcsepod.com/shared/podcasts/title/10869/66730">https://members.gcsepod.com/shared/podcasts/title/10869/66730</a></p>
	<p>Complete and incomplete combustion</p>	<p><b><u>You should be able to:</u></b></p> <p>Describe how boiling point, viscosity and flammability of hydrocarbons change with increasing molecular size.</p> <p>Explain the properties of hydrocarbons in relation to intermolecular forces.</p> <p>Write balanced symbol equations for the combustion of hydrocarbon fuels.</p> <p>Identify the products of combustion of alkanes.</p>	<p>Read and make notes on page 11</p> <p>Read and make notes on page 14</p> <p>Complete exam question on pages 17 and 18</p>	<p>Lesson on the uses of hydrocarbons <a href="https://classroom.thenational.academy/lessons/uses-of-hydrocarbons-74vkad">https://classroom.thenational.academy/lessons/uses-of-hydrocarbons-74vkad</a></p> <p>GCSE Pod video on: Complete and incomplete combustion <a href="https://members.gcsepod.com/shared/podcasts/title/10869/66736">https://members.gcsepod.com/shared/podcasts/title/10869/66736</a></p>

	Cracking	<p><b><u>You should be able to:</u></b></p> <p><b>Describe and explain</b> the process of cracking.</p> <p><b>Write</b> balanced symbol equations for the cracking of alkanes.</p> <p><b>Give examples</b> to illustrate the usefulness of cracking.</p> <p><b>Describe</b> the test for alkenes using bromine water</p>	<p>Read and make notes on page 24 and 25</p> <p>Complete exam question on pages 26 and 27</p> <p>Mark your answer on page 28-29</p>	<p>Lesson on cracking</p> <p><a href="https://classroom.thenational.academy/lessons/cracking-crw6at">https://classroom.thenational.academy/lessons/cracking-crw6at</a></p>
	Assessment		<p>You need to revise through all your notes from this topic. Once you are confident, you may attempt slides 26-27</p> <p>Check your answers using slide 28 -29</p>	