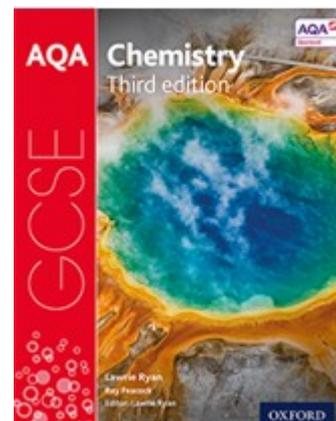


Triple Science: Chemistry - for 10S1 and 10S2. The Topics covered will be:

C8 Rates and Equilibria
 C9 Crude Oil and Fuels
 C10 Organic Reactions
 C11 Polymers
 C12 Chemical Analysis

Note: for the above chapters- if needed, refer to the Digital Chemistry e-book on Kerboodle which students can access when they log into their account on www.kerboodle.com. Students can read the double page spreads, in the digital e-books, for each topic covered below to support their learning alongside the work set from www.theeverlearner.com.



Enquiry Questions:

1. How are reaction rates and reversible reactions affected by changing the conditions?
2. How can reversible reactions establish a state of equilibrium?
3. How is the position of equilibrium affected by changing conditions?
4. How is a range of useful products obtained from crude oil?

Week	Title	Success checklist	Work to submit	Date due
1	C.8.1 Rates of Reaction	<p><i>I can explain how there can be different units for measuring rate of reaction.</i></p> <p><i>I can calculate the mean rate of reaction.</i></p> <p><i>I can calculate the rate of reaction at a specific time.</i></p>	<p>Students will watch teaching video 'Rates of Reaction' and will make notes in the 'notes' section.</p> <p>Students will use Test practice area to review knowledge - while using their notes taken during watching the video. Computer will offer a feedback to address misconceptions and/ or incorrect answers.</p> <p>Students will complete and submit the TEST YOURSELF which will be monitored by the class teacher.</p>	27 th April 2020
	C8.2 Collision Theory and Surface Area	<p><i>I can describe how changing the surface area changes the rate of reaction.</i></p> <p><i>I can describe what the activation energy of a reaction is.</i></p> <p><i>I can calculate the surface area to volume ratio.</i></p>	<p>Students will watch teaching video, 'Collision Theory' and will make notes in the 'notes' section.</p> <p>Students will use Test practice area to review knowledge - while using their notes taken during watching the video. Computer will offer a feedback to address</p>	

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		<p><i>I can describe how to achieve dynamic equilibrium.</i></p> <p><i>I can describe how the rate of the forward reaction compares to the rate of the backward reaction in dynamic equilibrium.</i></p> <p><i>I can describe Le Chatelier's Principle.</i></p>	<p>date</p> <p>Students complete self assessment of GCSE Style questions, which will be green-penned and self assessed using master answers. No submission required here, as students will be monitored by teacher at Checkpoint activity</p>	
5	<p>C8.9 Altering Conditions</p> <p>C9.1 Hydrocarbons</p>	<p><i>I can explain how changing conditions for a system at dynamic equilibrium affects the rate of the forward and reverse.</i></p> <p><i>I can predict the effect on yield of changing temperature, concentration, or pressure in a given equilibrium system.</i></p> <p><i>I can classify a hydrocarbon as an alkane.</i></p> <p><i>I can state the names and describe the first four alkanes.</i></p>	<p>Students will read Pages 144-145 in the Chemistry digital Textbook on Kerboodle and make notes.</p> <p>No work submission required for this lesson.</p> <p>Students will watch teaching video 'Hydrocarbons and their Properties' and will make notes in the 'notes' section. This video covers both lessons for this week.</p> <p>Students will use Test practice area to review knowledge - while using their notes taken during watching the video. Computer will offer a feedback to address misconceptions or incorrect answers.</p>	25 th May 2020
6	C.9.2 Fractional Distillation of Oil	<p><i>I can describe how the trend in colour, viscosity, flammability, and boiling point changes as the length of the hydrocarbon chain changes.</i></p> <p><i>I can describe how the properties of a fraction of crude oil make it appropriate for its use.</i></p>	<p>Students will watch teaching video 'Fractional Distillation' and will make notes in the 'notes' section. This video covers both lessons for this week.</p> <p>Students will use Test practice area to review knowledge - while using their notes taken during watching the video. Computer will offer a</p>	<p>8th June 2020</p> <p>8th June 2020</p>

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	C9.3 Burning Hydrocarbon Fuels	<p><i>I can describe how the trend in colour, viscosity, flammability, and boiling point changes as the length of the hydrocarbon.</i></p> <p><i>I can write balanced symbol equations for the complete and incomplete combustion of hydrocarbons.</i></p> <p><i>I can explain how to test for the products of complete combustion.</i></p>	<p>feedback to address misconceptions or incorrect answers.</p> <p>Students will read Pages 152-153 in the Chemistry digital Textbook on Kerboodle and make notes.</p> <p>No work submission required for this lesson.</p>	
7	C.9. 4 Cracking Hydrocarbons	<p><i>I can describe the process of cracking, including conditions.</i></p> <p><i>I can generate a balanced symbol equation to describe cracking.</i></p> <p><i>I can describe a chemical test to show an alkene is present.</i></p>	<p>Students will watch teaching video 'Cracking' and will make notes in the 'notes' section.</p> <p>Students will use Test practice area to review knowledge – while using their notes taken during watching the video. Computer will offer a feedback to address misconceptions or incorrect answers.</p> <p>Students will complete and submit the TEST YOURSELF which will be monitored by the class teacher.</p>	
	C10.1 Reactions of the Alkenes	<p><i>I can draw the displayed structural formulae for the first four alkenes.</i></p> <p><i>I can draw the displayed structural formulae for the products of the addition reactions between alkenes and hydrogen, water (steam), or a halogen.</i></p>	<p>Students will watch teaching video 'Alkenes and their Reactions' and will make notes in the 'notes' section.</p> <p>Students will use Test practice area to review knowledge – while using their notes taken during watching the video. Computer will offer a feedback to address misconceptions or incorrect answers.</p> <p>Students will complete and submit the TEST YOURSELF which will be monitored by the class teacher.</p>	15 th June 2020

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		<p><i>I can predict the word and balanced symbol equations for the complete combustion of an alkene when the number of carbon atoms is given.</i></p>		
8	<p>C10.2 Structure of Alcohols and Acids</p> <p>C10.3 Reactions and uses of Alcohols</p>	<p><i>I can classify an organic compound as an alcohol a carboxylic acid, or an ester.</i></p> <p><i>I can draw the structural and displayed formulae for the first four primary alcohols and the first four carboxylic acids.</i></p> <p><i>I can draw the structural and displayed formulae for ethyl ethanoate.</i></p> <p><i>I can describe fermentation to make aqueous solutions of ethanol, including a word equation.</i></p> <p><i>I can describe the reactions of alcohols, including using word equations.</i></p> <p><i>I can explain the relationship between ethanol and ethanoic acid.</i></p>	<p>Students will watch two teaching video 'Alcohols' and 'Carboxylic Acids' then will make notes in the 'notes' section.</p> <p>Students will use Test practice area to review knowledge – while using their notes taken during watching the video. Computer will offer a feedback to address misconceptions or incorrect answers.</p> <p>Students will complete and submit BOTH OF the TEST YOURSELF which will be monitored by the class teacher.</p>	22 nd June 2020
9	<p>C.10.4 Carboxylic Acids and Esters</p> <p>C11.1 Addition Polymerisation</p>	<p><i>I can describe why carboxylic acids are acidic.</i></p> <p><i>I can use word equations to describe the reactions of carboxylic acids with metal carbonates and with alcohols.</i></p> <p><i>I can describe how to make an ester.</i></p> <p><i>I can describe how monomers become polymers.</i></p>	<p>Complete Checkpoint 2 to the best of your ability and submit by the due date</p> <p>Students complete self assessment of GCSE Style questions, which will be green-penned and self assessed using master answers. No submission required here, as students will be monitored by teacher at Checkpoint activity</p> <p>Students will watch teaching video 'Addition Polymerisation'</p>	29 th June 2020

