



Chemistry - Rate of Reaction
Applicant Study Pack

Description of course	<p>A Level Chemistry</p> <p>In Chemistry you will learn about different substances, their properties, and how and why they react. Studying A Level Chemistry is essential for certain careers such as Medicine, Dentistry and Veterinary Sciences, and can lead you to many different careers in sectors such as energy, scientific research, cosmetics, engineering, environment, forensics, education and many more. At Clarendon we follow the OCR A specification for Chemistry. In this specification you study 6 modules that cover the breadth of the subject and will prepare you for further studies. These modules are:</p> <p>Module 1 – Development of practical skills in chemistry</p> <p>Module 2 – Foundations in chemistry (amount of substance, structure and bonding, redox, acids and bases)</p> <p>Module 3 – Periodic table and energy (groups of the periodic table, trends across a period, qualitative chemistry, enthalpies, rates and equilibria)</p> <p>Module 4 – Core organic chemistry (alkanes, alkenes, alcohols, haloalkanes, synthesis, analysis)</p> <p>Module 5 – Physical chemistry and transition elements (rates, equilibria, pH and buffers, enthalpy, entropy and free energy, electrochemistry, transition metals)</p> <p>Module 6 – Organic chemistry and analysis (aromatic compounds, carbonyls, carboxylic acids and esters, nitrogen compounds, polymers, synthesis, spectroscopy)</p>
Task 1	<p>You will research what factors can be changed to either speed up or slow down a chemical reaction.</p> <p>Success criteria:</p> <ul style="list-style-type: none"> - To define the term rate of reaction - To describe different methods of measuring the rate of a reaction - To name different factors that affect rate of reaction - To explain why those factors affect rate using collision theory - To define the term catalyst - To explain how a catalyst speed up a reaction <p>Use the links below to create a set of notes that meet the criteria:</p> <p>https://www.bbc.co.uk/bitesize/guides/z3nbqhv/revision/1</p> <p>https://studyrocket.co.uk/revision/gcse-chemistry-combined-science-aqa/combined-science-rate-of-chemical-change/rates-of-reaction</p> <p>https://www.youtube.com/watch?v=NhdtqnEfa9w&t=1s</p> <p>https://www.youtube.com/watch?v=ExHV_cFWYSM</p>

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Task 2	<p>Draw 3 different equipment diagrams to show the following methods of measuring rate of reaction and give an example of a particular reaction it could be used for:</p> <ol style="list-style-type: none"> 1. Collecting a gas and measuring volume 2. Loss of mass 3. Inspection (formation of a solid precipitate) <p>Complete the table below to show how different factors can affect rate of reaction and explain using collision theory:</p> <table border="1"> <thead> <tr> <th>Factor</th> <th>Effect on rate</th> <th>Explanation</th> </tr> </thead> <tbody> <tr> <td>Increasing temperature</td> <td></td> <td></td> </tr> <tr> <td>Decreasing pressure</td> <td></td> <td></td> </tr> <tr> <td>Increasing concentration</td> <td></td> <td></td> </tr> <tr> <td>Decreasing surface area</td> <td></td> <td></td> </tr> </tbody> </table> <p>Test yourself using the GCSE exam questions found here:</p> <p>https://www.physicsandmathstutor.com/chemistry-revision/gcse-aqa/rate-and-extent-of-chemical-change/</p>	Factor	Effect on rate	Explanation	Increasing temperature			Decreasing pressure			Increasing concentration			Decreasing surface area		
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Further reading / links (maximum 5)	<p>https://secondaryscience4all.wordpress.com/gcse-chemistry-aqa/gcse-chemistry-c2/c2-4-rates-of-reaction/</p> <p>http://www.a-levelnotes.co.uk/chemistry-aqa-a-level-notes-kinetics.html</p>															
Call to action	<p>Visit our website – www.clarendon.ac.uk for more information.</p> <p>Attend our New Student Day</p> <p>Join us for enrolment in August. Letters will be sent to all applicants at the end of July with more details.</p>															