

Chemistry Separate Science Paper 2, Higher

Chemistry Unit 6 – The Rate and Extent of Chemical Change

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers (CPG GCSE Chemistry Higher)
<p><u>Rate of Reaction</u></p> <p>(Spec reference 4.6.1)</p> <ul style="list-style-type: none"> • Methods of measuring reaction rates • Calculating average rates of reaction and rates at specific points on a graph using tangents • Collision theory – Activation energy and factors affecting rate (concentration, pressure, surface area, temperatures) • Catalysts – Definition, key features, how they work 	<p>Rates of Reaction</p> <p>https://www.bbc.co.uk/bitesize/guides/z3nbqhv/revision/1</p>	<p><u>Cognito</u></p> <p>https://www.youtube.com/watch?v=SPXany3-hU&t=1s</p> <p>https://www.youtube.com/watch?v=-4HXaUBbv04&t=1s</p> <p>https://www.youtube.com/watch?v=GCR5xeduq2o&t=1s</p> <p><u>Free Science</u></p> <p>https://www.youtube.com/watch?v=UkrBJ6-uGFA&t=1s</p> <p>https://www.youtube.com/watch?v=6LV63WtuvJg&t=1s</p> <p>https://www.youtube.com/watch?v=u4Co4N-Jmbs&t=1s</p> <p>https://www.youtube.com/watch?v=WojotwxPD6l&t=2s</p> <p>https://www.youtube.com/watch?v=G2TEfhwqg84&t=1s</p> <p>https://www.youtube.com/watch?v=hel8fQjxcO8&t=1s</p>	<p>67-71</p>

<p><i>Required Practical 5 - Investigate how changes in concentration affect the rates of reactions by a method involving measuring the volume of gas produced and a method involving a change in colour or turbidity</i></p>		<p><i>Required Practical 5 – Making Reaction rates</i> https://www.youtube.com/watch?v=N5p06i9llmo&t=1s</p>	
<p><u>Reversible reactions and dynamic equilibrium</u> (Spec reference 4.6.2)</p> <ul style="list-style-type: none"> • Reversible reactions and the energy changes in each direction • Dynamic equilibrium – Definitions and how it is established • Changing the position of the equilibrium – Effect of changing concentration, pressure or temperature (Le Chatelier’s Principle) 	<p>Rates of Reaction https://www.bbc.co.uk/bitesize/guides/zyhvw6f/revision/1</p>	<p>Cognito https://www.youtube.com/watch?v=ty9TczsW5ew&t=1s https://www.youtube.com/watch?v=LYyoncESnmQ</p> <p>Free Science https://www.youtube.com/watch?v=66qcNNJFy6E https://www.youtube.com/watch?v=utmV4Q0t6MI&t=1s https://www.youtube.com/watch?v=SII5m0RQqjk&t=1s https://www.youtube.com/watch?v=hngzmRrAXTE&t=1s</p>	<p>72-73</p>

Chemistry Unit 7 – Organic Chemistry

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers
<p><u>Carbon compounds as fuels and feedstock</u></p> <p>(Spec reference 4.7.1)</p> <ul style="list-style-type: none"> • Crude oil formation • Hydrocarbons – Definition, Properties • Alkanes – Definition, names and structures (1-4 carbons) • Fractional Distillation – Method, Importance • Cracking – Importance, production of alkenes 	<p>Crude oil, hydrocarbons and alkanes</p> <p>https://www.bbc.co.uk/bitesize/guides/zshvw6f/revision/1</p>	<p>Cognito</p> <p>https://www.youtube.com/watch?v=ykIFTtTjoso&t=1s</p> <p>https://www.youtube.com/watch?v=F8J2Firblxg&t=1s</p> <p>https://www.youtube.com/watch?v=CjmriZq5xRo&t=1s</p> <p>https://www.youtube.com/watch?v=bOiYLKX9ZRY&t=1s</p> <p>Free Science</p> <p>https://www.youtube.com/watch?v=CX2IYWggEBc&t=1s</p> <p>https://www.youtube.com/watch?v=4EAh9E2KhOE&t=1s</p> <p>https://www.youtube.com/watch?v=8PM_tWNFbGY&t=3s</p> <p>https://www.youtube.com/watch?v=3I7yCkSXPos&t=1s</p> <p>https://www.youtube.com/watch?v=7AWwjKbRa_o&t=1s</p>	<p>75-77</p>

Chemistry Unit 8 – Chemical Analysis

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers
<i>Required Practical 7 – Use of Chemical Tests to identify the ions in unknown single ionic compounds</i>	Analysing substances (Slides 1-4 only) https://www.bbc.co.uk/bitesize/guides/zxtvw6f/revision/1	Cognito https://www.youtube.com/watch?v=mWTgHidea4Y&t=2s Free Science https://www.youtube.com/watch?v=Bd0A44lv2OI&t=1s https://www.youtube.com/watch?v=dBvpd9RhX8E&t=1s https://www.youtube.com/watch?v=n1SiW0IJayI <i>Required Practical 7 – Testing ions</i> https://www.youtube.com/watch?v=4iZR4XIJOE&t=1s	88-89

Chemistry Unit 9 – Chemistry of the Atmosphere

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers
<p><u>The Composition and evolution of the Earth's atmosphere</u></p> <p>(Spec reference 4.9.1)</p> <ul style="list-style-type: none">• Percentage of each gas in the atmosphere of the Earth today• How scientists believe the Earth's atmosphere evolved• How oxygen increased and carbon dioxide decreased during the evolution of the Earth's atmosphere	<p>Developing the Earth's Atmosphere</p> <p>https://www.bbc.co.uk/bitesize/guides/zg4qfcw/revision/1</p>	<p>Cognito</p> <p>https://www.youtube.com/watch?v=l0h_-3M0Pso</p> <p>Free Science</p> <p>https://www.youtube.com/watch?v=t1Z3GINIdLA&t=37s</p> <p>https://www.youtube.com/watch?v=14XIKuOZ2Yw&t=132s</p>	91

YOU WILL NOT BE ASSESSED ON

- Carbon dioxide and methane as greenhouse gases (Spec ref 4.9.2)

Chemistry Unit 10 – Using Resources

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers
<p><u>Using the Earth's resources and obtaining potable water</u></p> <p>(Spec reference 4.10.1)</p> <ul style="list-style-type: none"> • Sustainable development – Finite, Renewable, Natural, Synthetic • Process of obtaining potable water • Process of treating waste water • Alternative methods of extracting metals – Phytomining, Bioleaching 	<p>Sustainable Development https://www.bbc.co.uk/bitesize/guides/zgqhcj6/revision/1</p> <p>Water https://www.bbc.co.uk/bitesize/guides/zpcjsrd/revision/1</p>	<p>Cognito https://www.youtube.com/watch?v=PDeiRIQvWnM</p> <p>https://www.youtube.com/watch?v=jLaeBykDwaM&t=9s</p> <p>Free Science https://www.youtube.com/watch?v=1UQnUQR0tTo&t=1s</p> <p>https://www.youtube.com/watch?v=-XczTGavTZU</p> <p>https://www.youtube.com/watch?v=n7pYRQs20bl&t=1s</p> <p>https://www.youtube.com/watch?v=b5RVPauf4oM&t=1s</p>	<p>99, 100 (top half), 102, 103</p>
<p><u>The Haber Process and the use of NPK fertilisers</u></p> <p>(Spec reference 4.10.4)</p> <ul style="list-style-type: none"> • The Haber Process • Productions and use of NPK fertilisers 	<p>Fertilisers https://www.bbc.co.uk/bitesize/guides/z9tvw6f/revision/1</p>	<p>Cognito https://www.youtube.com/watch?v=1_HoWz5Kxfk</p> <p>Free Science https://www.youtube.com/watch?v=HAKaD6-7fgQ</p>	<p>61-63</p>

		https://www.youtube.com/watch?v=rKzt9BvvEeQ&t=1s	
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