Chemistry Combined Science - Trilogy Paper 2, Foundation

Chemistry Unit 6 – The Rate and Extent of Chemical Change

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers (Combined Science Foundation)	GCSE Knowledge Organiser (Foundation)
Rate of Reaction **(Spec reference 5.6.1)** • Methods of measuring reaction rates • Calculating average rates of reaction • Collision theory – Activation energy and factors affecting rate (concentration, pressure, surface area, temperatures • Catalysts – Definition, key features, how they work	**Rates of Reaction** https://www.bbc.co.uk/bitesize/guides/zpkp7p3/revision/1	**Cognito** https://www.youtube.com/watch?v=SPXanyy3-hU&t=1s https://www.youtube.com/watch?v=-4HXaUBbv04&t=1s https://www.youtube.com/watch?v=GCR5xeduq2o&t=1s **Free Science** https://www.youtube.com/watch?v=UkrBJ6-uGFA&t=1s https://www.youtube.com/watch?v=u4Co4N-Jmbs&t=1s https://www.youtube.com/watch?v=WojotwxPD6I&t=2s https://www.youtube.com/watch?v=G2TEfhwgq84&t=1s https://www.youtube.com/watch?v=hel8fQjxcO8&t=1s *Required Practical 11 – Making Reaction rates*	138-143	61-63

Required Practical 11 - 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		https://www.youtube.com/watch?v=N5p06i9ilmo&t=1s		
Reversible reactions and dynamic equilibrium **(Spec reference 5.6.2)** • Reversible reactions and the energy changes in each direction • Dynamic equilibrium – Definitions and how it is established	**Rates of Reaction (Slide 1 only)** https://www.bbc.co.uk/bitesize/guides/z32bpbk/revision/1	**Cognito** https://www.youtube.com/watch?v=ty9TczsW5ew&t=1s **Free Science** https://www.youtube.com/watch?v=66qcNNJFy6E	144	64

Chemistry Unit 7 – Organic Chemistry

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers (Combined Science Foundation)	GCSE Knowledge Organiser (Foundation)
Carbon compounds as fuels and feedstock **(Spec reference 5.7.1)** • Crude oil formation • Hydrocarbons – Definition, Properties • Alkanes – Definition, names and structures (1-4 carbons) • Fractional Distillation – Method, Importance • Cracking – Importance, production of alkenes	**Crude oil, hydrocarbons and alkanes** https://www.bbc.co.uk/bitesize/guides/zxd4y4j/revision/1	**Cognito** https://www.youtube.com/watch?v=ykIFTtTjoso&t=1s https://www.youtube.com/watch?v=F8J2FirbIxg&t=1s https://www.youtube.com/watch?v=CjmriZq5xRo&t=1s https://www.youtube.com/watch?v=bOiYLKX9ZRY&t=1s **Free Science** https://www.youtube.com/watch?v=CX2IYWggEBc&t=1s https://www.youtube.com/watch?v=4EAh9E2KhOE&t=1s https://www.youtube.com/watch?v=8PM_tWNFbGY&t=3s https://www.youtube.com/watch?v=3I7yCkSXPos&t=1s	146-147	65-66

		https://www.youtube.com/watch?v=7AWwjKbRa_o&t=1s		

Chemistry Unit 8 – Chemical Analysis

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers (Combined Science Foundation)	GCSE Knowledge Organiser (Foundation)
Purity, Formulations and Chromatography **(Spec reference 5.8.1)** • Pure Substances – Definition, how to identify using melting and boiling points • Formulations – Definition, Examples • Chromatography – Method, How it works, Using to	**Analysing substances (Slides 1-4 only)** https://www.bbc.co.uk/bitesize/guides/zp2wrwx/revision/1	**Cognito** https://www.youtube.com/watch?v=-OtJI-R-4rU&t=1s https://www.youtube.com/watch?v=TdJ57SQ6GAQ&t=1s **Free Science** https://www.youtube.com/watch?v=3oJxWwcnfJY https://www.youtube.com/watch?v=hndJf_5aB9I *Required Practical 12 – Chromatography*	150-152	67-68

identify if a substance is pure, Calculating Rf values *Required Practical 12 – Investigate how paper chromatography can be used to separate and tell the difference between coloured substances*		https://www.youtube.com/watch?v=P8i4QYncQxI		

Chemistry Unit 9 – Chemistry of the Atmosphere

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers (Combined Science Higher)	GCSE Knowledge Organiser (Foundation)
The Composition and evolution of the Earth's atmosphere **(Spec reference 5.9.1)** • Percentage of each gas in the atmosphere of the Earth today	**Developing the Earth's Atmosphere** https://www.bbc.co.uk/bitesize/guides/z9pk3k7/revision/1	**Cognito** https://www.youtube.com/watch?v=l0h_-3M0Pso **Free Science** https://www.youtube.com/watch?v=t1Z3GlNldLA&t=37s https://www.youtube.com/watch?v=14XIKuOZ2Yw&t=132s	157	69

• How scientists believe the Earth's atmosphere evolved • How oxygen increased and carbon dioxide decreased during the evolution of the Earth's atmosphere				
Common atmospheric pollutants and their sources **(Spec reference 5.9.3)** • Identify main pollutant gases produced by combusting fossil fuels – sulphur dioxide, oxides of nitrogen, carbon monoxide, particulates • Describe how these pollutant gases are produced	**Polluting the Atmosphere (Slides 5,6)** https://www.bbc.co.uk/bitesize/guides/zq3797h/revision/5	**Cognito** https://www.youtube.com/watch?v=2ri95j0cShg **Free Science** https://www.youtube.com/watch?v=yLp6LOgPHmI	158	Bottom 71

• Explain the problems caused by each gas				

YOU WILL NOT BE ASSESSED ON

- Carbon dioxide and methane as greenhouse gases (Spec ref 5.9.2)

Chemistry Unit 10 – Using Resources

Major focus topic area	BBC Bitesize Websites	Video links	Revision guide page numbers (Combined Science Higher)	GCSE Knowledge Organiser (Foundation)
Using the Earth's resources and obtaining potable water **(Spec reference 5.10.1)** • Sustainable development – Finite, Renewable, Natural, Synthetic • Process of obtaining potable water	**Sustainable Development** https://www.bbc.co.uk/bitesize/guides/zswfxfr/revision/1 **Water** https://www.bbc.co.uk/bitesize/guides/zg6cfcw/revision/1	**Cognito** https://www.youtube.com/watch?v=PDeiRlQvWnM https://www.youtube.com/watch?v=jLaeBykDwaM&t=9s **Free Science** https://www.youtube.com/watch?v=1UQnUQR0tTo&t=1s https://www.youtube.com/watch?v=-XczTGavTZU	159-160, 163-165	Top 72, 73-75

• Process of treating waste water		https://www.youtube.com/watch?v=n7pYRQs20bI&t=1s		