

Culcheth High School Key Stage 4 Curriculum Map 2023 - 2024

Subject: Chemistry Year 11

Exam Board: AQA




CULCHETH
HIGH SCHOOL
THE BEST THAT WE CAN BE

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Key Concepts	Topics 5 and 6 Chemical changes and energy changes and – rates of reaction	Topics 5 and 6 Chemical changes and energy changes and – rates of reaction	Topics 7 and 8 organic chemistry, Chemical analysis	Topics 7 and 8 organic chemistry, Chemical analysis	Topics 9 & 10 chemistry of the atmosphere, using resources	Revision
Themes	<p>Topic 6</p> <ul style="list-style-type: none"> Calculating rates of reaction Factors that affect rate of reaction Collision theory and activation energy Catalysts, Reversible reactions Dynamic equilibrium <p>Required practicals will be covered within the lesson</p>	<p>Topic 8</p> <ul style="list-style-type: none"> Purity, formulations and chromatography Identification of common gases Chemical spectroscopy <p>Topic 9</p> <ul style="list-style-type: none"> Evolution of Earth's atmosphere Carbon dioxide and greenhouse gases Atmospheric pollutants and their sources 	<p>Topic 8</p> <ul style="list-style-type: none"> Purity, formulations and chromatography Identification of common gases Chemical spectroscopy <p>Topic 9</p> <ul style="list-style-type: none"> Evolution of Earth's atmosphere Carbon dioxide and greenhouse gases Atmospheric pollutants and their sources 	<p>Topic 9</p> <ul style="list-style-type: none"> Evolution of Earth's atmosphere Carbon dioxide and greenhouse gases Atmospheric pollutants and their sources <p>Topic 10</p> <ul style="list-style-type: none"> Earth's resources and obtaining potable water Life cycle assessment and recycling 	<p>Topic 9</p> <ul style="list-style-type: none"> Evolution of Earth's atmosphere Carbon dioxide and greenhouse gases Atmospheric pollutants and their sources <p>Topic 10</p> <ul style="list-style-type: none"> Earth's resources and obtaining potable water Life cycle assessment and recycling 	

	<p>Topic 7</p> <ul style="list-style-type: none"> • Carbon compounds • Cracking • Alkanes alkenes <p>Triple science also covers</p> <ul style="list-style-type: none"> • Alcohols • Carboxylic acids • Polymerisation • Amino acids • DNA 	<p>Triple science also covers</p> <ul style="list-style-type: none"> • DNA • Chemical spectroscopy • Identification of ions <p>Required practicals will be covered in lesson</p>	<p>Triple science also covers</p> <ul style="list-style-type: none"> • DNA • Chemical spectroscopy • Identification of ions <p>Required practicals will be covered in lesson</p>	<p>Triple science also covers</p> <ul style="list-style-type: none"> • Using materials • Haber process <p>Required practicals will be covered in lesson</p>	<p>Triple science also covers</p> <ul style="list-style-type: none"> • Using materials • Haber process <p>Required practicals will be covered in lesson</p>	
<p>Writing whole school literacy focus</p>	<p>Scientific writing:</p> <ul style="list-style-type: none"> • Writing a plan • Drawing a conclusion • Evaluating a method • Presenting findings • Spelling and using scientific vocabulary in the correct context • Understanding the different prefixes and suffixes of scientific vocabulary • Use of capital letters and full stops 					
<p>Spiritual, Moral, Social and Cultural theme (SMSC) Fundamental British Values</p>	<p>In Chemistry in Year 11 we deal with SMSC and British values in the following areas:</p> <ul style="list-style-type: none"> • Evolution of the Earth's atmosphere – How Humans have had an impact on the composition of its atmosphere • Atmospheric pollutants – How Humans have had an impact on the Earth regarding a range of different pollutants • Global warming and climate change – Humans impact on the environment and how they have contributed towards Global warming and climate change • Isolation of metals from the world and the damage this is doing to our environment. Fracking and its impact on people's lives • Impact on the world including acid rain production and the effect on living organisms. Use of oil in society and how it can be replaced in the future • The Haber process and how it impacts on the environment in both positive and negative ways. • Invention of the Haber process to produce ammonia by the Jewish German Fritz Haber, which was then used to kill Jews during the holocaust. • Celebrate the British scientists involved with the discovery of the structure of the Atom. • Cultural development - the periodic table 					

	Cultural development – the importance of collaboration					
Key Assessment Foci, suggested Assessments and Feedback week	See QMA calendar	See QMA calendar	See QMA calendar	See QMA calendar	See QMA calendar	See QMA calendar
Special Events		Moon Watch 11th November		13-22 nd March National Science and Engineering Week		
Possible Visits			Science Live Trip			
CEIAG - Possible Employer Engagement Activities	<p>Careers communication / Oracy</p> <ul style="list-style-type: none"> • Research and presentation in Space topic (Autumn term 2) and Energy resources topic (summer term 2) • QWC science exam questions • Science skills sheets <p>Teamwork</p> <ul style="list-style-type: none"> • Practicals • Oracy presentations • Range of group activities throughout course e.g. think pair share, snowballing, debating, project-based learning, talking triads, card sorts <p>Negation and persuasions</p> <ul style="list-style-type: none"> • During practical activities and presentations <p>Problem solving – working individually and with others to find solutions to problems. E. g</p> <ul style="list-style-type: none"> • Practical skills • Data analysis, • Comparison/Evaluate exam questions <p>Leadership</p> <ul style="list-style-type: none"> • During practical activities and presentations <p>Organisation</p> <ul style="list-style-type: none"> • Practical skills – planning, equipment list, implementation, time management • Exam technique – time management • Presentations – time management <p>Perseverance and motivation</p> <ul style="list-style-type: none"> • Data analysis • Evaluate exam questions 					

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- Presentation

Ability to work under pressure

- Timed activities
- QMAs
- PPE

AQA Exam Board – Triple Students will be awarded 3 separate numerical GCSE Science grades one for each Science. 6 exams 1r 45 mins long, 28 assessed pieces of practical work.

AQA Exam Board – Trilogy Students will be awarded 2 numerical GCSE Science grades based on an average of the 3 sciences e.g. 3,4 or 4,5. 6 exams 1r 15 mins long, 21 assessed pieces of practical work.