

Culcheth High School Key Stage 4 Curriculum Map 2023 - 2024

Subject: Biology Year 10

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	Topic 2 - Organisation	Topic 3 – Infectious disease	Topic 4 - Bioenergetics	Topics 7 Ecology	Topics 7 Ecology	Topics 7 Ecology
Themes	<p>Topic 2</p> <ul style="list-style-type: none"> Organ systems Heart, blood vessels and blood Heart disease Diabetes Cancer Plants organ systems <p>Required practicals will be covered in lesson</p>	<p>Topic 3</p> <ul style="list-style-type: none"> Infectious diseases Viral diseases Bacterial diseases Human defence system Vaccination Antibiotics Development of new drugs <p>Triple Science also covers</p> <ul style="list-style-type: none"> Culturing microorganism Monoclonal antibodies Plant disease <p>Required practicals will be covered in lesson</p>	<p>Topic 4</p> <ul style="list-style-type: none"> Photosynthesis Respiration Exercise Metabolism <p>Required practicals will be covered in lesson</p>	<p>Topic 7</p> <ul style="list-style-type: none"> Adaptations, interdependence and completion Organisation of an ecosystem Biodiversity and the effect of humans on ecosystems <p>Triple science also covers</p> <ul style="list-style-type: none"> Decomposing Trophic levels in an ecosystem Food production <p>Practicals in lessons</p>	<p>Topic 7</p> <ul style="list-style-type: none"> Adaptations, interdependence and completion Organisation of an ecosystem Biodiversity and the effect of humans on ecosystems <p>Triple science also covers</p> <ul style="list-style-type: none"> Decomposing Trophic levels in an ecosystem Food production <p>Practicals in lessons</p>	<p>Topic 7</p> <ul style="list-style-type: none"> Adaptations, interdependence and completion Organisation of an ecosystem Biodiversity and the effect of humans on ecosystems <p>Triple science also covers</p> <ul style="list-style-type: none"> Decomposing Trophic levels in an ecosystem Food production <p>Practicals in lessons</p>
Writing whole school literacy	Scientific writing:					

<p>focus</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 					
<p>Spiritual, Moral, Social and Cultural theme (SMSC) Fundamental British Values</p>	<p>In Biology in Year 10 we deal with SMSC and British values in the following areas:</p> <ul style="list-style-type: none"> • Contraception – Understanding the different forms of contraception and options open to people of different beliefs • Human impact on the environment – How the increase in human population size has had an impact on pollution and global warming. Also, how the increased population size has affected biodiversity. • Impact of non-communicable diseases – Diabetes, Heart disease and Cancer. • Developing new drugs – The need for animal testing in preclinical drug trials. • Monoclonal Antibodies – The use of mice in the production of Monoclonal Antibodies. • Spread of Malaria – Understanding of low socio-economic areas having fewer resources to stop the spread. • The publication by a doctor that the MMR vaccine is linked to autism without rigorous scientific testing and the implications of this on the health of a generation of children in the UK. • The use of NHS money to fund treatment associated with obesity and drug/alcohol abuse • The legal aspects of drug abuse • The use of stem cells in reproductive research and the cure for inherited diseases • Embryo selection 					
<p>Key Assessment Foci, suggested Assessments and Feedback week</p>	<p>See QMA calendar</p>	<p>See QMA calendar</p>	<p>See QMA calendar</p>	<p>See QMA calendar</p>	<p>See QMA calendar</p>	<p>See QMA calendar</p>
<p>Special Events</p>				<p>13-22nd March National Science and Engineering Week</p>		
<p>Possible Visits</p>			<p>Science Live Trip</p>			<p>Biology field course (Triple only)</p>
<p>CEIAG - Possible Employer Engagement Activities</p>	<p>Careers communication / Oracy</p> <ul style="list-style-type: none"> • 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

Negation and persuasions

- During practical activities and presentations

Problem solving – working individually and with others to find solutions to problems. e.g.

- Practical skills
- Data analysis,
- Comparison/Evaluate exam questions

Leadership

- During practical activities and presentations

Organisation

- Practical skills – planning, equipment list, implementation, time management
- Exam technique – time management
- Presentations – time management

Perseverance and motivation

- Data analysis
- Evaluate exam questions
- 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.

Throughout the year students will revisit work done in year 9 to consolidate their understanding and reinforce learning.