



KS4 Curriculum: Biology

Curriculum Vision

AQA GCSE Biology (code 8461)

The Vision for our Biology Students is to develop:

1. Good Biologists who have an interest and understanding of the living world around them.
2. Pupils who are able to work independently (and metacognitively).
3. Pupils who are able to take risks and be confident enough to tackle challenging tasks (linked to metacognition).
4. Pupils who are scientifically literate and confident with scientific language.
5. Students who have developed long term memory/ long term learning.
6. Students who are equipped with the knowledge and skills to move on the next stage of learning and or to careers or further education in sciences, engineering and medicine.

Curriculum Profile

Year 9 Spring and Summer term students will commence GCSE with work on Ecology

Year 10

Autumn Term 1	Autumn Term 2
Cell Biology: <ul style="list-style-type: none"> - Microscopy - Types of cells - Specialised cells and Stem Cells - Cell division - Transport across membranes 	Organisation: <ul style="list-style-type: none"> - Cells, tissues, organs, systems - Digestion - Enzymes - Factors that affect enzymes - Circulatory system

Spring Term 1	Spring Term 2
Organisation continued... <ul style="list-style-type: none"> - Non communicable diseases - Transport in plants 	Infection and Response: <ul style="list-style-type: none"> - Microorganisms and disease - Human Defences

- Transpiration	<ul style="list-style-type: none"> - Vaccination and antibiotics - Drug development and MABs - Plant diseases
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Summer Term 1	Summer Term 2
Bioenergetics: <ul style="list-style-type: none"> - Photosynthesis - Factors affecting photosynthesis 	Bioenergetics continued... <ul style="list-style-type: none"> - Respiration - Types of respiration - Effect of exercise

Year 11

Autumn Term 1	Autumn Term 2
Homeostasis and Response: <ul style="list-style-type: none"> - Nervous system - Reflex arcs - The brain and the eye - Thermoregulation - Hormones and their effects 	Homeostasis and Response continued... <ul style="list-style-type: none"> - Control of blood glucose - Kidneys and excretion - Fertility and control of the menstrual cycle - Plant hormones and their uses

Spring Term 1	Spring Term 2
Inheritance, Variation and Evolution: <ul style="list-style-type: none"> - DNA and chromosomes - Protein synthesis - Meiosis - Sexual and asexual reproduction 	Inheritance, Variation and Evolution continued... <ul style="list-style-type: none"> - Genetics - Genetic engineering - Natural selection and Evolution - Speciation and extinction Ecology part 2 <ul style="list-style-type: none"> - Human influence - Pollution - Global warming and greenhouse effect - Biogas

Content from the spring 2 term is likely to be completed in the summer term 1 as well.

Summer Term 1	Summer Term 2
Revision and Examination technique	Public Examinations

Please note that this timeline may be subject to change.

Assessment and Feedback

All students will:

- have at least one piece of assessed work reviewed by their teacher per half-term (this increases to two pieces of assessed work if students receive five or more taught hours per fortnight).
- receive feedback which outlines how they should develop their learning. This feedback should be summative, highlighting both key strengths and key areas for development in students' work.
- be given the opportunity to act upon their feedback in a structured task. This task should then be reviewed again by the subject teacher. A review of this task can act as the second assessed task.

Resources to support learning beyond the classroom

Please find a link to the specification overview from AQA below:

<https://www.aqa.org.uk/subjects/science/gcse/biology-8461/specification-at-a-glance>

Links to relevant websites/online resources

<https://www.bbc.co.uk/bitesize/examspecs/zpgcbk7>

<https://members.gcsepod.com/login/>

<https://www.physicsandmathstutor.com/biology-revision/gcse-aqa/>

<https://www.youtube.com/@fuseschool>