

## POST 16 SUBJECT OVERVIEW

### Post 16 Subject Overview

**Name of Subject** - A-level Biology

**Which Examination Specification is Studied for this Course?** AQA

**Why should I study this course?** -

*Biology is the study of living things. This links with much of the world around us, such as disease, diet and exercise, genetics and evolution. The course involves opportunities for practical work.*

*There are many careers available to students who have a qualification in Biology. These include things like:*

- *Research Scientists*
- *Jobs in healthcare, such as Doctor, Nurse, Paramedic.*
- *Sport and fitness*
- *Agriculture*

*Naturally, a qualification in Biology will help students to access any university courses that link with the careers mentioned above.*

**Who is suitable to study this course?** - *Students who have enjoyed studying Biology will excel at this course. It links well with the other Sciences and Maths. Any student wishing to pursue the careers mentioned above should consider studying Biology A-level.*

**What GCSE Qualifications Support the Study of this Course?**

- *A strong GCSE in Biology or in Combined Science.*
- *The course content for A-level Biology includes some Maths and Statistics, therefore GCSE Maths at higher level is required*
- *GCSE English would be advantageous, due to the extended answers required for the examinations in A-level Biology.*

**What are the Qualification Requirements for this Course?**

GCSE Biology and GCSE Maths, both at grade 6 or above

### How is the Course Delivered?

Students have 5 hours of lessons in the classroom each week. It is recommended that they dedicate the same amount of time to independent study. The course is delivered by two specialist teachers, who will deliver different parts of the course.

Students also complete 12 required practicals that are assessed and make up a practical endorsement. Practical skills are also assessed in the examinations.

Subject Overview		
Half Term	Year 12	Year 13
Autumn 1	Biological molecule structures, cell structure, transport within cells.	Inheritance, responses of organisms to their environment.
Autumn 2	Immunity, DNA structure and replication.	Nerve impulses, muscle contraction, photosynthesis
Spring 1	Gas exchange in mammals, insects and fish, the heart, protein synthesis, natural selection.	Respiration, homeostasis.
Spring 2	Haemoglobin and oxygen dissociation, plant transport.	Control of gene expression and biotechnology.

<b>Summer 1</b>	Biodiversity, antibiotic resistance, aseptic technique.	Consolidation and revision.
<b>Summer 2</b>	Ecology, essay writing skills, mathematical skills.	Exam preparation.

### How is the Course Assessed?

The course is 100% exam based and examined by 3 terminal exam papers:

#### Paper 1

Any content from topics 1–4, including relevant practical skills written exam: 2 hours - 91 marks (35% of A Level) 76 marks: a mixture of short and long answer questions 15 marks: extended response questions.

#### Paper 2

Any content from topics 5–8, including relevant practical skills written exam: 2 hours - 91 marks (35% of A Level) 76 marks: a mixture of short and long answer questions 15 marks: comprehension question.

#### Paper 3

Any content from topics 1–8, including relevant practical skills written exam: 2 hours - 78 marks (30% of A Level) 38 marks: structured questions, including practical techniques 15 marks: critical analysis of given experimental data 25 marks: one essay from a choice of two titles

Across each exam the following skills are assessed:

*AO1: Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures.*

*AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures: In a theoretical context In a practical context When handling qualitative and quantitative data.*

*AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to: Make judgements and reach conclusions Develop and refine practical design and procedures.*

*Throughout the course students are assessed at regular intervals using praising stars tests which test any content which has been covered up to that point of the course.*

### **What is our Recommended Subject Reading list to Support your Study?**

Websites:

<https://s-cool.co.uk/a-level/biology>

Examples of wider reading for biology A level could include:

*The Selfish Gene Richard Dawkins*

*Behave: The Biology of Homosapiens Robert Sapolsky*

*The Double Helix James Watson*

*The Extended Phenotype Richard Dawkins*

*Origin of species Charles Darwin*

*Life Ascending Nick Lane*

*Genome Matt Ridley*

*The Lives of a Cell* Lewis Thomas

*The Story of the Human Body* Daniel Lieberman

*Life on the Edge* Jim Al-Khalili and Johnjoe McFadden

*The Epigenetic Revolution* Nessa Carey

