

BIOLOGY

Exam board: AQA

Assessment method: All examinations are written.

Length of exams and breakdown of units:

A-level: Three written papers on topics 1-8

Paper 1 (2hrs): any content from topics 1-4, including relevant practical skills. 35% of A Level

Paper 2 (2hrs): any content from topics 5-8, including relevant practical skills. 35% of A Level.

Paper 3 (2hrs): any content from topics 1-8, including relevant practical skills. 30% of A Level

There is no practical exam in the new syllabus. Practical skills are assessed throughout the course, with 12 required practicals which all students must complete to a pass standard, and examined via questions on the written papers.

Course content

1. Biological molecules – water, carbohydrates, proteins, lipids and nucleic acids
2. Cells – structure of eukaryotic and prokaryotic cells, cell membranes, cell recognition and immunity
3. Organisms exchange substances with their environment – gas exchange, digestion and absorption, mass transport in animals and plants
4. Genetic information, variation and relationships between organisms – DNA, genes and chromosomes, protein synthesis, genetic diversity, adaptation, classification and biodiversity
5. Energy transfers in and between organisms – photosynthesis, respiration, energy and ecosystems, nutrient cycles
6. Organisms respond to changes in their internal and external environments – survival and response, the nervous system, muscles, homeostasis and negative feedback
7. Genetics, populations, evolution and ecosystems – inheritance, population genetics, evolution and speciation, studying ecosystems
8. The control of gene expression – gene mutations, stem cells and cell differentiation, epigenetics, gene expression and cancer, using genome projects, gene technology

Overlap with other A Level courses

Ecology topics – Geography. Biochemistry topics – Chemistry. Statistical tests – Maths, Geography. Nervous system – Psychology.

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