

BIOLOGY (Higher)

What are the aims of this course?

The Higher Biology Course offers a broad and up-to-date selection of concepts and ideas relevant to the central position of life science within our society. Learners will develop deeper understanding of the underlying themes of biology — evolution and adaptation; structure and function; genotype and niche — and the scale of topics ranges from molecular through to whole organism and beyond.

What are the recommended entry levels for Higher Biology?

National 5 pass (grade A or B) in Biology and minimum National 4 pass at (A or B) in Mathematics.

What content is included in this course?

The course is made up of 3 units of study:

Topics cover both **plant** and **animal** biology.

1. **DNA and the Genome-** DNA structure and replication, Gene expression, Cellular differentiation, Genome structure, Mutations, Evolution and Genome sequencing.
2. **Metabolism and Survival-** Metabolic pathways, Respiration, Metabolic rate, Environmental and Genetic control of metabolism
3. **Sustainability and Interdependence-** Plant growth and productivity, Breeding, Crop protection, Animal welfare, Symbiosis, Social behaviour, Biodiversity.

What skills will I develop?

Pupils will develop and improve their problem solving, data handling, literacy and practical skills. Communication and organisational skills will also be enhanced. Group work will develop social skills.

What learning and teaching approaches will I experience?

A variety of teaching and learning approaches are used throughout the course including individual pupil work, group work and whole class work. Practical work is a major part of the course and pupils will be given the opportunity to carry out experiments and work with microscopes.

How will I be assessed?

Each of the units is assessed by a short written test (UA) and a practical experiment report. At the end of each unit there will be an extension test or prelim exam to prepare pupils for the final examination. The course is graded based upon the results of an external examination and an assignment. The external exam will last 3 hours and be a combination of multiple choice, extended response and essay style questions which assess both knowledge and skills. The assignment is a written report based upon research into a chosen area of the course.

What are the homework requirements?

You should expect written homework once a week. Homework will include simple revision questions; past paper questions and reading over the day's work. Pupils who are aiming for a top grade will be expected to complete extensive revision out with class.

What are the possible progression routes?

To Advanced Higher, and then on to HNC, HND or degree level study in Biological Sciences, Biochemistry, Biotechnology, Medicine etc.