

## **Biology A-level**

Exam board: AQA

### **Where do I start?**

You need at least a **Grade 7** in GCSE Trilogy Science including a **Grade 7** in the Biology component OR a **Grade 7** in GCSE Separate Science Biology. A **Grade 6** or above in Mathematics is also required.

### **Biology – about the subject:**

Biology is one of the key branches of Science along with Chemistry and Physics. It is the study of life. Biologists investigate living things. At one time biologists could be divided into zoologists - who studied animals - and botanists - who studied plants. The discovery of bacteria and viruses led to the development of microbiology and virology. As better technical resources and techniques were developed, biologists moved on to study the structure of cells (cytology) and the chemicals from which the cells are made (molecular biology). The study of genetics and heredity expanded following the elucidation of the structure of DNA. On the large scale, Biology has embraced aspects of Geography and Geology in ecology, the study of interrelationships of organisms with each other and with their physical and climatic environment. Biologists also contribute to palaeontology, the study of fossils and biological evolution. Biologists make discoveries which affect the lives of all of us. Examples include: how to understand and control the development and the spread of disease which can decimate or eradicate species; how to develop strains of plant which give high food yields; and the genetic code which provides the blueprint for the development of an organism.

### **What type of learner chooses Biology?**

Learners study Biology because they want to:

- become mainstream biologists and develop an understanding of how living things work or become involved in one of the areas described above;
- improve their career prospects. Biology is a practical subject and one in which the frontiers of knowledge are being expanded on a regular basis, particular in molecular biology and pharmaceuticals;

The A-level Biology Course provides an excellent preparation for further study and an enjoyable and interesting experience.



### **What aspects of the subject will I be studying?**

Paper 1: Biological molecules, Cells, Organisms exchange substances with their environment, Genetic information, variation and relationships between organisms

Paper 2: Energy transfers in and between organisms, Organisms respond to changes in their internal and external environments, Genetics, populations, evolution and ecosystems, The control of Gene expressions

Paper 3: Any topic from any paper

### **How will I be assessed?**

Learners are assessed on three main objectives:

- 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 data and when handling quantitative data.
- AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to: make judgements, reach conclusions and to develop and refine practical design and procedures.

### **What are the higher education prospects?**

The course is excellent preparation for university courses in Medicine, Veterinary Practice, Biochemistry, Biology, Physiology, Pharmacy, Genetics, Nursing, Agriculture, Microbiology, Ecology, Forensic Science and Sports Science.