

# GCE BIOLOGY

## Why choose WJEC GCE Biology?

Biology is the study of life. It will enable you to develop a vast array of skills and acquire knowledge about the natural world and all the living things within it.

Gaining an A-level in this subject opens up a vast range of opportunities for both university degrees and career options.

## What will I study?

In **AS Biology** there are two themed units, which are normally assessed at the end of the first year of study.

### **Unit 1: Basic Biochemistry and Cell Organisation.**

This unit covers the topics of biological molecules, cells, enzymes and cell division.

### **Unit 2: Biodiversity and Physiology of Body**

**Systems.** This unit covers the biodiversity of organisms, adaptations that organisms have for gas exchange, transport and nutrition.

In **A level Biology**, there are a further two themed units which are assessed at the end of the second year of study.

### **Unit 3: Energy, Homeostasis and the**

**Environment for Life.** This unit covers the topics of photosynthesis, respiration, microbiology, homeostasis, the nervous system, ecosystems and human impact on the environment.

### **Unit 4: Variation, Inheritance and Options.**

This unit covers reproduction in animals and plants, inheritance, variation and evolution and the application of reproduction and genetics. There is also a choice of one option topic from the following: Immunology and Disease, Human Musculoskeletal Anatomy or Neurobiology and Behaviour.

# GCE BIOLOGY



## What skills will I develop?

- A level Biology will enable you to develop an understanding of different areas of biology and how they relate to each other.
- Competency in a variety of investigative and practical techniques. These would include using a microscope, recording quantitative measurements in a variety of contexts, microbiology, fieldwork and dissection
- The ability to apply appropriate mathematical skills in biological contexts.
- The confidence to apply biological knowledge to unfamiliar contexts
- You will be able to analyse, interpret and evaluate scientific information

## How will I be assessed?

### AS Biology: Two written examinations

**Unit 1: Basic Biochemistry and Cell Organisation** Written examination 80 marks (1 hour 30 minutes)

**Unit 2: Biodiversity and Physiology of Body Systems** Written examination 80 marks (1 hour 30 minutes)

### A level Biology: The above plus a further three units.

**Unit 3: Energy, Homeostasis and the Environment for Life** Written examination 90 marks (2 hours)

**Unit 4: Variation, Inheritance and Options** Written examination 90 marks (2 hours)

**Section A: 70 marks compulsory questions**

**Section B: 20 marks from a choice of 1 out of 3 options**

### Unit 5: Practical examination

This unit will assess your practical skills developed over the duration of the course.

It comprises two tasks which will be completed on set dates in the Spring term of the second year of study.

- **Experimental task 20 marks (2 hours)**  
You will be given a set of apparatus and examination paper containing a method to follow. You will then carry out the investigation and analyse and evaluate the data.
- **Practical Analysis Task 30 marks (1 hour)**  
You will be provided with experimental data to analyse. The task will also include the theoretical assessment of microscope skills.

## Careers with Biology

An A level in Biology can open up a wealth of career paths. These include jobs within the following fields: Medicine and healthcare, Science and research, Agriculture, Sport and Fitness and Education.