

## A LEVEL IN BIOLOGY

**Biology is a diverse and popular subject. Covering topical issues, such as medical science, genetic engineering, biotechnology, and the environment, you'll develop an essential knowledge and understanding of some of its key areas.**

A Level Biology builds on your understanding and appreciation of scientific methods, while developing your confidence in practical skills, mathematics and problem solving. This encourages you to take an interest in global scientific issues and new developments.

### Key Facts

**Course Duration:** 2 Years

### Course Contents

The course uses scientific, practical teaching and investigation wherever possible to ensure that you gain maximum enjoyment and become an enthusiastic biologist.

### Year 12:

- Biological molecules
- Microscopy and cell structure of bacteria, plants, and animals
- Cell division
- Transport across cell membranes
- Cell recognition and immunity
- The importance of a gas exchange system in living organisms
- Human gas exchange and what happens when things go wrong
- Digestion of absorption of the food we eat
- Cardiovascular system and oxygen carriage
- DNA, genes, and chromosomes
- Genetic diversity and mutation
- Genetic diversity and adaptation
- Classification of species

### **Year 13:**

- Photosynthesis
- Energy transfer in an ecosystem
- Respiration
- Nutrient cycling
- Responding to changes in the environment in different organisms
- Nervous co-ordination
- Muscles and muscle contraction
- Homeostasis: controlling blood glucose and water level
- Inheritance
- Populations and evolution
- Control of gene expression
- Gene technology

### **Features and Benefits**

Biology can be taken as part of a science-based programme, combined with Chemistry, Physics, or Mathematics. Biology can also add a scientific element to a humanities-based programme.

### **Minimum Entry Requirements:**

All Loughborough College Sixth Form courses have minimum entry requirements of at least five GCSEs at grade C/4 or above, including English Language and Maths.

### **Subject Specific Entry Requirements:**

GCSE Maths and Science (Double Science or two 'traditional' sciences) at grade 6.

### **Assessment Methods:**

- Three x 2 hour exams
- Paper 1 and Paper 2, 35% each, and Paper 3, 30%.
- You will complete 12 compulsory practicals over the two years and a number of skills will be assessed by your teacher. This will make up the practical endorsement (CPAC).

### **Progression Opportunities**

A Level Biology will prepare you for further study and careers in a variety of disciplines, from medicine, physiotherapy, and biochemistry to nursing, food science, and zoology.