

# BIOLOGY

## Course Content

Biology provides a wide breadth of knowledge which touches on many varied aspects of the topic. These range from internal workings of organisms in physiology and the interdependence of living things in Ecology to social issues including mans impact on the environment and the ethical considerations of Genetics. There are two modules at AS level and a further 3 at A level:

Unit 1	Basic Biochemistry and Cell Organisation
Unit 2	Biodiversity and Physiology of Body Systems
Unit 3	Energy, Homeostasis and the Environment
Unit 4	Variation, Inheritance and Options
Unit 5	Practical Work Based on the Content of the Whole Syllabus

## **Assessment Procedures**

AS Biology consists of two theory papers sat at the end of Year 12. Each paper is worth 20% of the overall A level. For those just studying AS level Biology, each paper is worth 50% of the AS level.

A2 Biology consists of three units. Two theory papers worth 25% of the A level and these are sat at the end of Year 13. There is also a practical exam worth 10% of the A level. This is sat at Easter of Year 13.

## **Entry Requirements**

Candidates are required to have at least a B grade in either GCSE (Biology) or Science at Higher level.

## **Progression**

There is a wide range of possible careers including medicine, dentistry, veterinary science, microbiology, ecology, biochemistry, physiotherapy, teaching, genetics, agriculture, forestry, pest control, sports science etc.



# CHEMISTRY

## Why study Chemistry beyond GCSE?

Chemistry is often referred to as the 'central science' as it forms a natural bridge between so many different scientifically based subjects. It is concerned with the study of different materials and their different properties, and consequently, it can be easily applied to so many aspects and fields of modern life. Although the 'world is always changing', chemical ideas and reactions remain constant forever. Indeed a basic understanding of this subject will allow us to explain all scientific theories, ideas and phenomenon.

More importantly, the study of Chemistry in the sixth form allows students the opportunity to follow a multitude of different (and extremely popular courses) at University. These obviously include any medical qualification, along with any research and development, analysis and environmental aspirations.

In addition, candidates interested in any scientific based university course will find, at the very least, that Chemistry is 'preferred' or 'compulsory' to successful entry.

## The AS Course

Year 12 studies will develop the basic concepts learnt at GCSE through application and practical exercises.

By the end of Year 12, candidates will have successfully completed at least 24 practical tasks along with TWO examination papers.

## The A2 Course

Studies will develop the fundamentals explained in Year 12 through further application and will expand on their understanding of the more demanding chemical concepts.

As with Year 12, the A2 course requires TWO examination papers to be completed with the addition of a practical examination.

## Entry Requirements

Candidates are required to have at least a B grade in either GCSE (Chemistry) or Science at Higher level.



# PHYSICS

## Why Study Physics?

Physics is crucial to understanding the world around us, the world inside us, and the world beyond us. It is the most basic and fundamental science. Physics challenges our imaginations with concepts like relativity and string theory, and it leads to great discoveries, like computers and lasers, that change our lives.

## Course Content:

Physics consists of 5 units: units 1 and 2 at AS level and units 3 to 5 at A2 level.

Unit 1: Motion, Energy and Matter

Unit 2: Electricity and Light

Unit 3: Oscillations and Nuclei

Unit 4: Fields and Options

Unit 5: Practical Examination

## Assessment Procedure

At AS level, units 1 and 2 are external examinations both of 1½ hours duration and, both contributing 20% to the A2 grade.

At A2 level, units 3 and 4 are external examinations with unit 3 lasting 2¼ hours and unit 4 lasting 2 hours, each contributing 25% to the A2 grade. Unit 5 is a practical examination and is worth 10% of the A2 grade.

## Entry Requirements

Candidates are required to have at least a B grade in either GCSE (Physics) or Science & Additional Science at Higher level. Students are also required to have attained at least a grade B in Mathematics at higher tier.

## Progression

Students are required to gain at least an E grade at AS to progress to A2. Completion of the A2 course allows students to undertake a vast array of degree courses and a wide range of careers.

