

Biology AS/A level



The WJEC A level in Biology provides a wide breadth of knowledge which touches on many varied aspects of a range of topics. These include the internal workings of organisms in physiology and the interdependence of living things in ecology, to social issues including human influence on the environment and the ethical considerations of genetics.

The study of biology encourages an appreciation of these issues and their implications as well as providing an insight into the living world. The inclusion of optional topics allows learners to gain a deeper insight into a wider range of biological topics. It is intended that the use of a variety of approaches will stimulate interest, promote understanding and engender an overall appreciation and sense of wonder at the living world.

The WJEC A level in Biology aims to encourage learners to:

- develop essential knowledge and understanding of different areas of biology and how they relate to each other
- develop and demonstrate a deep appreciation of the skills, knowledge and understanding of scientific methods used within biology
- develop competence and confidence in a variety of practical, mathematical and problem solving skills
- develop their interest in and enthusiasm for biology, including developing an interest in further study and careers associated with the subject
- understand how society makes decisions about biological issues and how biology contributes to the success of the economy and society.

This specification promotes an understanding of scientific method as the means to increase scientific knowledge and develop an enquiring and critical approach. Learners will develop an awareness that different perceptions, predictions and interpretations may be applied according to context.

Practical work is an intrinsic part of biology, and is greatly valued by higher education. It is imperative that practical skills are developed throughout this course and that an investigative approach is promoted.

AS Biology

There are 2 units covered in year 12:

AS UNIT 1: BASIC BIOCHEMISTRY AND CELL ORGANISATION

AS UNIT 2: BIODIVERSITY AND PHYSIOLOGY OF BODY SYSTEMS

Each unit has a written examination of 1 hour 30 minutes and is 20% of the A Level qualification.

A Level Biology

A2 UNIT 3: ENERGY, HOMEOSTASIS AND THE ENVIRONMENT

A2 UNIT 4: VARIATION, INHERITANCE AND OPTIONS

Each unit has a written examination of 2 hours and is 25% of the A Level qualification.

A2 UNIT 5: PRACTICAL EXAMINATION

The practical examination is 10% of the qualification.

This unit gives learners the opportunity to demonstrate their ability to carry out an investigation and to analyse and evaluate experimental data. This will be carried out individually, under controlled conditions. The practical examination comprises of two tasks:

- Experimental Task (20 marks)
- Practical analysis Task (30 marks)

What skills will I get from studying Biology?

Biology helps you to develop practical, research, problem solving and analytical skills. It helps you to challenge your ideas develop independent thinking and apply biological knowledge to practical contexts. In addition, it enables learners to develop their numeracy, literacy and communication skills too.

What careers is Biology good for?

Biology is an important subject for careers in: Agriculture, Biochemistry, Dentist, Ecology, Genetics, Marine Biology, Medicine Microbiology, Nursing, Nutritional Science, Pharmacy, Physiotherapy, Teaching, Veterinary, Veterinary assistant and Zoology.

