

Why Biology?

Biology – the study of living organisms – affects us all. You will find out how Biology is helping to find solutions to world problems. Advances in technology mean biologists are exploring the use of genetic modification to produce new plants and drugs, solving crimes by understanding crime scene material, and developing new sources of food for our growing population.

There are many career opportunities connected with biology, including medicine, veterinary work, nursing, dentistry, physiotherapy, food science, agriculture, sports science, biomedical science, pharmacology and beauty therapy.

Course Outline

Biology is a hands-on subject that develops your analytical thinking, and helps you to solve problems through experiments and research.

You will learn about DNA and the human genome, metabolism and survival and sustainability and interdependence

BIOLOGY HIGHER

Details of Course Components

The course has three compulsory units, plus an added value unit that allows candidates to look at one area of biology in more detail.

DNA and the Human Genome In this unit you will:

- Develop your skills of scientific enquiry by studying: The structure of DNA, replication of DNA, control of gene expression, cellular differentiation, the structure of the genome, mutations, evolution and genomic sequencing.

Metabolism and Survival: In this unit you will:

- Develop your skills of scientific enquiry by studying: Metabolism pathways and their control, cellular respiration, metabolic rate, metabolism in conformers and regulators, metabolism and adverse conditions, environmental control of metabolism, genetic control of metabolism and ethical considerations in the use of microorganisms, hazards and control of risks.

Interdependence and Sustainability: In this unit you will:

- Develop your investigation and analytical thinking skills by studying Food supply, plant growth and productivity, plant and animals breeding, crop protection, animal welfare, symbiosis, social behaviour, mass extinction and biodiversity, threats to biodiversity.

Assignment

- carry out an investigation on a biological topic, drawing on the skills you have learned from the other units and present your findings in an assignment.

ASSESSMENT

Your work will be assessed by your teacher on an ongoing basis and by the SQA at the end of the course

The course award is determined by:

Final exams (80%)

Paper 1 25 marks

Paper 2 95 marks

Assignment (20%)

An investigation written up in class and submitted to the SQA to be marked. 30marks

The Course assessment is graded A–D. Your grade will depend on the total marks gained from the assignment and final exams.



FACULTY OF SCIENCE

Biology Staff :

Mr Alan Stickle, Miss Rowan Cannell,
Miss Sue Rodwell

Chemistry Staff:

Mr Stephen McNeil, Miss Kat Barnard,
Mrs Maryann Blakeborough

Physics Staff:

Mrs Abi Gibbon, Mr Steven Dempsey

Career Areas:

There are many career opportunities connected with biology, including medicine, veterinary work, nursing, dentistry, physiotherapy, food science, agriculture, sports science, biomedical science, pharmacology and beauty therapy.

Courses in Turriff Academy

National 4 Environmental Science

National 4 Chemistry

National 4 Physics

National 5 Biology

National 5 Chemistry

National 5 Physics

Higher Biology

Higher Chemistry

Higher Physics

Scientific Technologies NPA

Advanced Higher Biology

Advanced Higher Chemistry

Advanced Higher Physics

Useful websites to help you with your choices:

www.myworldofwork.co.uk

www.skillsdevelopmentscotland.co.uk

Further advice and information on these options is available from your subject teacher, guidance teacher and careers adviser.