# Have you ever wondered...

- What is the point of exercise?
- Why do we get old?
- Do plants have sex?
- How does blood clot?
- Who were the Neanderthals?

Study A Level Biology B (Advancing Biology) to find out the answers.

## A Level Biology B (Advancing Biology)

A Level Biology B will give you an exciting insight into the contemporary world of biology. It covers a range of different contexts, conveying the excitement of contemporary biology. This combination of academic challenge, relevant context and practical focus makes the prospect of studying A Level Biology B highly appealing.

You will learn about biology in a range of different contexts and about the impact it has on research and many aspects of everyday life. You will learn to investigate and solve problems across a range of biological concepts.

### **Key features**

- Simple straightforward assessment through examinations
- Based on key contexts relevant to biology
- Opportunities to develop practical skills through a range of experiments and investigations.

## A LEVEL **BIOLOGY B** (advancing biology)



## What's included

Development of practical skills in biologyThe develop<br/>classificationCells and microscopyCassificationWater and its importance in plants and<br/>animalsPathogenic<br/>The immunProteins and enzymesControllingNucleic acidsThe cellularThe heart and monitoring heart functionRespiratoryTransport systems in mammalsCellular respGas exchange in mammals and plantsFertility andThe developing cell: cell division and cell<br/>differentiationThe effects of<br/>system

The developing individual: meiosis, growth and development

- The development of species: evolution and classification Pathogenic microorganisms The immune system Controlling communicable diseases The cellular basis of cancer and treatment Respiratory diseases and treatment Cellular respiration Metabolism and exercise Fertility and assisted reproduction The effects of ageing on the reproductive system Photosynthesis, food production and management of the environment
- d The impact of population increase
  Plant reproduction
  Patterns of inheritance
  Population genetics and epigenetics
  Gene technologies
  The nervous system and the identification and consequences of damage
  Monitoring visual function
  The effect of ageing on the nervous system
  The principles and importance of homeostasis
  The hormonal control of blood glucose and the management of diabetes
  Kidney functions and malfunctions

Emphasis throughout the course is on developing knowledge, competence and confidence in practical skills and problem solving. You will learn how society makes decisions about scientific issues and how sciences contribute to the success of the economy and society.

#### How will you be assessed?

- Total of six hours assessment split over three examination papers (2 x 2 hours 15 minutes and 1 x 1 hour 30 minutes) taken at the end of the two year course.
- A wide range of question types including: multiple choice, short answer and extended response questions.
- Opportunity to demonstrate your knowledge of both theory and practical skills through the examinations.

#### To achieve a Practical Endorsement, through a range of experiments, you will become competent in:

- Following procedures
- Applying an investigative approach when using instruments and equipment
- Working safely
- Making and recording observations
- Researching, referencing and reporting.

#### Where can A Level Biology B take me?

- A Level Biology B is an excellent base for a university degree in healthcare, such as medicine, veterinary or dentistry, as well as the biological sciences, such as biochemistry, molecular biology or forensic science. Biology can also complement sports science, psychology, sociology and many more.
- A Level Biology B can open up a range of career opportunities including: biological research, medical, environmental, forensics, sports and science communication. The transferable skills you will learn, such as problem solving, are also useful for many other areas, such as law.

#### What are the benefits?

- An interesting and challenging learning experience, linking key biological ideas and understanding how they relate to each other.
- The development of transferable skills including: investigative, problem solving, research, decision making, mathematical skills and analytical skills.
- Opens up a range of possibilities for further study and careers associated with the subject.

#### Are you...

- Aiming to be a doctor, nurse or vet?
- Thinking of a career in research?
- Interested in the world around you?
- A problem solver?
- Interested in science?
- Keen on practical work?
- Studying other sciences or maths?

If so, A Level Biology B is for you.

#### **Thought provoking questions**

- How can we beat cancer?
- Why are plants so important?
- How does the human body function?
- What are pathogens?
- How did language evolve?

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