

# Subject: Biology

## Level: AS Level and A Level

The A level Biology course will follow the OCR Biology A pathway. Biology A provides a flexible approach to teaching. The specification is divided into topics, each covering different key concepts of biology. Teaching of practical skills is integrated with the theoretical topics and they are assessed through the written papers. For A Level only, the Practical Endorsement will also support the development of practical skills.

### Entry Requirements (Exam board: OCR)

Students will be expected to have 5 A\*-B grades at GCSE or equivalent, including English and Maths and a minimum of Biology Grade B or an A in Additional Science.

### Course Outline (Exam Board: OCR Biology A)

Biology A is split into six teaching modules: Modules 1 to 4 constitute the stand alone AS Level qualification; Modules 1 to 6, combined with the Practical Endorsement, constitutes the full A Level.

The teaching modules can be summarised as:

#### Module 1:

Development of practical skills in biology – this module underpins the whole of the specification, and covers the practical skills that students should develop throughout the course. The practical skills in this module can be assessed within written examinations and (for A Level only) within the Practical Endorsement.

#### Module 2:

Foundations in biology – covering key concepts required throughout the remaining modules.

#### Module 3 and 4:

AS Level topics.

#### Module 5 and 6:

A Level only topics.

#### At AS Level:

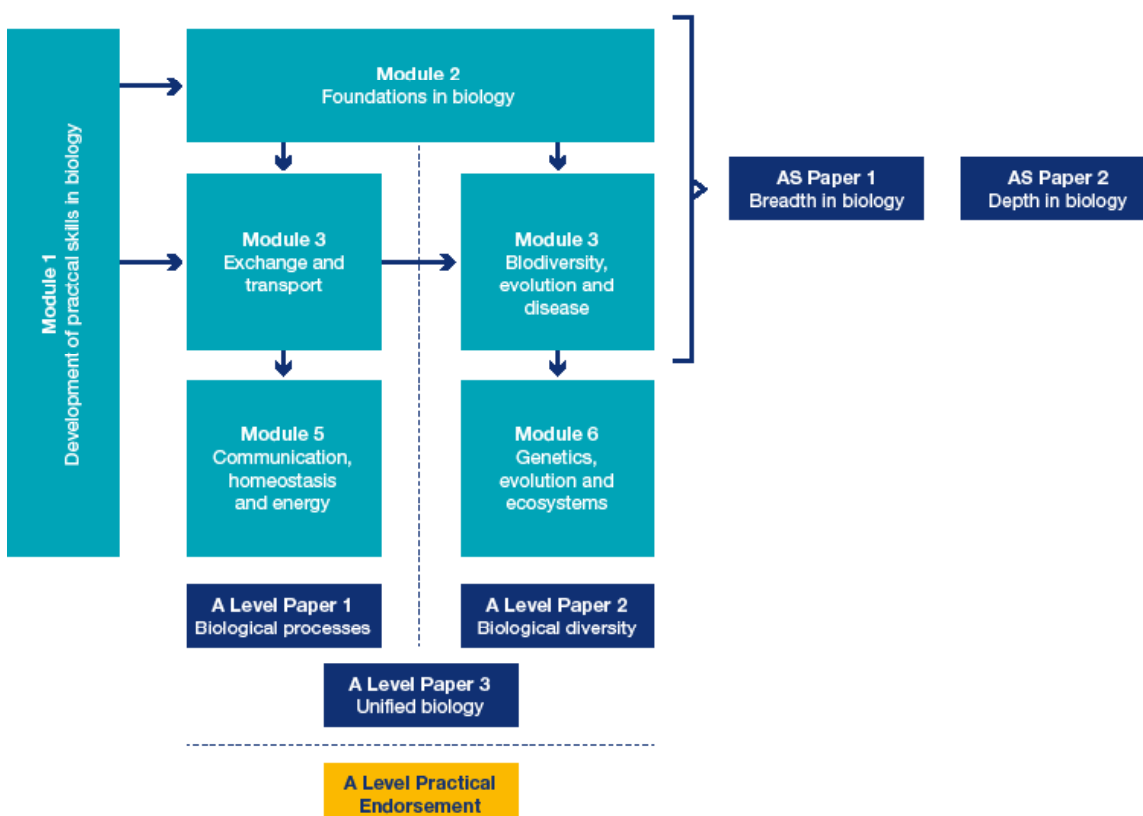
AS Papers 1 and 2 can assess any content from Modules 1 to 4.

#### At A Level:

A Level Paper 1 assesses the content from Modules 1, 2, 3 and 5

A Level Paper 2 assesses the content from Modules 1, 2, 4 and 6

A Level Paper 3 assesses the content from Modules 1 to 6.



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### What will I learn on this course?

This course will enable you to:

- Use and analyse data;
- Understand how human/animal/plant systems work;
- Learn about factors in human health;
- Gain valuable practical skills (especially analytical techniques);
- Understand important environmental issues;
- Discuss current biological issues such as genetic engineering in an authoritative way.

### Who would be a successful student of Biology?

This course will appeal to students who:

- Enjoy scientific disciplines, practical and field work;
- Would like to know more about recent developments in genetics, health and the environment;
- Are studying related courses, such as chemistry, physics and sports studies;
- Would like to take a science subject to balance humanities or arts disciplines;
- Are interested in Biology.

### Career Opportunities

You will find this course useful if you wish to follow a career in the following areas:

- Biological sciences;
- Research;
- Pharmacy;
- Medicine;
- Veterinary medicine;
- Health care professions
- Environmental sciences.

### Content overview

<b>Module 1</b> Development of practical skills in biology	Skills of planning, implementing, analysis and evaluation
<b>Module 2</b> Foundations in biology	Includes: Cell Structure; Biological molecules; Nucleotides and nucleic acids; Enzymes; Biological membranes; Cell division, cell diversity and cellular organisation
<b>Module 3</b> Exchange and transport	Includes: <ul style="list-style-type: none"><li>• Exchange surfaces</li><li>• Transport in animals</li><li>• Transport in plants</li></ul>
<b>Module 4</b> Biodiversity, evolution and disease	Includes: <ul style="list-style-type: none"><li>• Communicable diseases, disease prevention and the immune system</li><li>• Biodiversity</li><li>• Classification and Evolution</li></ul>
<b>Module 5</b> Communication, homeostasis and energy	Includes: <ul style="list-style-type: none"><li>• Communication and homeostasis</li><li>• Excretion as an example of homeostatic control</li><li>• Neuronal communication</li><li>• Hormonal communication</li><li>• Plant and animal responses</li><li>• Photosynthesis</li><li>• Respiration</li></ul>
<b>Module 6</b> Genetics, evolution and ecosystems	Includes: <ul style="list-style-type: none"><li>• Cellular control</li><li>• Patterns of inheritance</li><li>• Manipulating genomes</li><li>• Cloning and biotechnology</li><li>• Ecosystems</li><li>• Populations and sustainability</li></ul>