

Switching to OCR B from AQA

The content within the [OCR Biology B specification](#) covers the ‘Big Ideas’ of biology in engaging contexts. The logical progression supports AS level co-teaching and linear A level.

OCR Biology B	AQA
<p>Module 1: Practical skills Planning, implementing, analysis and evaluation Plus all the skills to be covered in the Practical Endorsement</p>	<p>The same practical skills, as mandated by the DfE, are listed in Chapters 7 and 8 of the AQA specification</p>
<p>Module 2: Cells, chemicals for life, transport and gas exchange</p> <ul style="list-style-type: none"> • Cells and microscopy • Water and its importance in plants and animals • Proteins and enzymes • Nucleic acids • The heart and monitoring heart function • Transport systems in mammals • Transport systems in plants • Gas exchange in mammals and plants 	<p>3.1 Biological molecules (all sub-sections: monomers and polymers; carbohydrates; lipids; proteins, nucleic acids; ATP; water; inorganic ions)</p> <p>3.2 Cells (2 of the 4 sub-sections: cell structure; transport across cell membranes)</p> <p>3.4 Genetic information, variation and relationships between organisms (3 of the 7 sub-sections: DNA, genes and chromosomes; DNA and protein synthesis; Genetic diversity can arise as a result of mutation or during meiosis)</p> <p>3.8 The control of gene expression (1 of the 4 sub-sections: Alteration of the sequence of bases in DNA can alter the structure of proteins)</p> <p>3.3 Organisms exchange substances with their environment (3 of the 4 sub-sections: surface area to volume ratio; gas exchange; mass transport)</p>



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<p>Module 3: Cell division, development and disease control</p> <ul style="list-style-type: none"> • The developing cell • The developing individual • The development of species • Pathogenic microorganisms • The immune system • Controlling communicable disease • The cellular basis of cancer and treatment • Respiratory diseases and treatment 	<p>3.2 Cells (2 of the 4 sub-sections: All cells arise from other cells; cell recognition and the immune system)</p> <p>3.4 Genetic information, variation and relationships between organisms (4 of the 7 sub-sections: Genetic diversity and adaptation; species and taxonomy; Biodiversity within a community; investigating diversity)</p>
<p>Module 4: Energy, reproduction and populations</p> <ul style="list-style-type: none"> • Cellular respiration • Metabolism and exercise • Fertility and assisted reproduction • Effects of ageing on reproduction • Photosynthesis, food production and management of the environment • The impact of population increase • Plant reproduction 	<p>3.5 Energy transfers in and between organisms (all sub-sections: photosynthesis; respiration; energy and ecosystems; nutrient cycles)</p>
<p>Module 5: Genetics, control and homeostasis</p> <ul style="list-style-type: none"> • Patterns of inheritance • Population genetics and epigenetics • Gene technologies • The nervous system • Monitoring visual function • Effects of ageing on nervous system • Homeostasis • Hormonal control of blood glucose • Kidney function and malfunction 	<p>3.5 Energy transfers in and between organisms (2 of the 4 sub-sections: photosynthesis; respiration)</p> <p>3.6 Organisms respond to changes in their internal and external environments (all sub-sections: stimuli, both internal and external, are detected and lead to a response; nervous coordination; skeletal muscles; homeostasis)</p> <p>3.7 Genetics, populations, evolution and ecosystems (all sub-sections: inheritance; populations; evolution may lead to speciation; populations in ecosystems)</p> <p>3.8 The control of gene expression (3 of the</p>



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	4 sub-sections: Gene expression is controlled by a number of features; using genome projects; gene technologies allow the study and alteration of gene function allowing a better understanding of organism function and the design of new industrial and medical processes)
<p>Appendix 5d: Mathematical requirements</p> <ul style="list-style-type: none"> • Arithmetic and numerical computation • Handling data • Algebra • Graphs • Geometry and trigonometry 	<p>Chapter 6: Mathematical requirements and exemplifications</p> <ul style="list-style-type: none"> • Arithmetic and numerical computation • Handling data • Algebra • Graphs • Geometry and trigonometry

*Note: one major topic present in the AQA specification does not appear in the OCR B specification: **3.3.3 Digestion and absorption***



Assessment

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<p>AS Paper 1: Foundations of Biology Modules 1-3 50% of AS Written paper 1 hour 30 minutes 70 marks</p> <p>Section A multiple choice questions, 20 marks. Section B short structured questions, covering problem solving, calculations, practical and theory, 50 marks.</p>	<p>AS Paper 1: Topics 1-4 & practical skills 50% of AS Written paper 1 hour 30 minutes 75 marks</p> <p>65 marks short answer questions, 10 marks comprehension.</p>
<p>AS Paper 2: Biology in Depth, Modules 1-3 50% of AS Written paper 1 hour 30 minutes 70 marks</p> <p>Short structured questions and extended response questions, problem solving, calculations, practical and theory.</p>	<p>AS Paper 2: Topics 1-4 & practical skills 50% of AS Written paper 1 hour 30 minutes 75 marks</p> <p>65 marks short answer questions, 10 marks extended response.</p>
<p>A Level Paper 1: Fundamentals of Biology Modules 1-5 41% of A level Written paper 2 hours 15 minutes 110 marks</p> <p>Section A multiple choice questions, 30 marks. Section B short structured questions, and extended response questions, problem solving, calculations, practical and theory 80 marks.</p>	<p>A Level Paper 1: Topics 1-4 & practical skills 35% of A level Written paper 2 hours 91 marks</p> <p>76 marks short and long answer questions, 15 marks extended answers.</p>
<p>A Level Paper 2: Scientific Literacy in Biology Modules 1-5 37% of A level Written paper 2 hours 15 minutes 100 marks</p>	<p>A Level Paper 2: Topics 5-8 & practical skills 35% of A level Written paper 2 hours 91 marks</p>



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<p>Advance notice article (underpins 20-25 marks). Short structured questions and extended response questions, problem solving, calculations, practical and theory.</p>	<p>76 marks short and long answer questions, 15 marks extended answers.</p>
<p>A Level Paper 3: Practical Skills in Biology Modules 1–5 22% of A level Written paper 1 hour 30 minutes 60 marks</p> <p>Short structured questions and extended response questions, problem solving, calculations, practical and theory.</p>	<p>A Level Paper 3: Topics 1-8 & practical skills 30% of A level Written paper 2 hours 78 marks</p> <p>38 marks structured questions. 15 marks analysis of experimental data 25 marks essay question.</p>

