

## Switching to OCR B from OCR Human Biology

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	OCR Human Biology
<p><b>Module 1: Practical skills</b></p> <p>Planning, implementing, analysis and evaluation</p> <p>Plus all the skills to be covered in the Practical Endorsement</p>	<p>Unit F223 (controlled assessment tasks)</p> <p>Unit F226 (Extended Investigation)</p>
<p><b>Module 2: Cells, chemicals for life, transport and gas exchange</b></p> <ul style="list-style-type: none"> <li>• Cells and microscopy</li> <li>• Water and its importance in plants and animals</li> <li>• Proteins and enzymes</li> <li>• Nucleic acids</li> <li>• The heart and monitoring heart function</li> <li>• Transport systems in mammals</li> <li>• Transport systems in plants</li> <li>• Gas exchange in mammals and plants</li> </ul>	<p><b>F221 Module 1: Molecules and Blood</b></p> <ul style="list-style-type: none"> <li>• The blood</li> <li>• Molecules</li> <li>• Preventing blood loss</li> <li>• Blood for medical use</li> </ul> <p><b>F221 Module 2: Circulatory and Gas Exchange Systems</b></p> <ul style="list-style-type: none"> <li>• The Heart and Monitoring Heart Function</li> <li>• The Circulatory System</li> <li>• The Lungs and Investigating Lung Function</li> </ul>
<p><b>Module 3: Cell division, development and disease control</b></p> <ul style="list-style-type: none"> <li>• The developing cell</li> <li>• The developing individual</li> <li>• The development of species</li> <li>• Pathogenic microorganisms</li> <li>• The immune system</li> <li>• Controlling communicable disease</li> <li>• The cellular basis of cancer and treatment</li> <li>• Respiratory diseases and treatment</li> </ul>	<p><b>F222 Module 1: The Developing Cell</b></p> <ul style="list-style-type: none"> <li>• Mitosis</li> <li>• Cancer</li> </ul> <p><b>F222 Module 2: The Developing Individual</b></p> <ul style="list-style-type: none"> <li>• The Biological Basis of Individuality and the Monitoring of Fetal Development</li> </ul> <p><b>F222 Module 3: Infectious Disease</b></p> <ul style="list-style-type: none"> <li>• Controlling the Spread of Infectious disease</li> <li>• Acquiring Immunity</li> <li>• The Future of Infectious Disease</li> </ul>



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	<p>Control</p> <p><b>F222 Module 4: Non-Infectious Disease</b></p> <ul style="list-style-type: none"> <li>Lung disease</li> </ul>
<p><b>Module 4: Energy, reproduction and populations</b></p> <ul style="list-style-type: none"> <li>Cellular respiration</li> <li>Metabolism and exercise</li> <li>Fertility and assisted reproduction</li> <li>Effects of ageing on reproduction</li> <li>Photosynthesis, food production and management of the environment</li> <li>The impact of population increase</li> <li>Plant reproduction</li> </ul>	<p><b>F224 Module 1: Energy and Respiration</b></p> <ul style="list-style-type: none"> <li>Respiration</li> <li>Athletic Performance</li> </ul> <p><b>F224 Module 2: Human Reproduction and Populations</b></p> <ul style="list-style-type: none"> <li>Fertility and Contraception</li> <li>Assisted Reproduction</li> <li>Food, Farming and Populations – Producing Food</li> <li>Food, Farming and Populations – Human Impact on the Environment</li> </ul> <p><b>F225 Module 4: The Third Age</b></p> <ul style="list-style-type: none"> <li>The Effects of Ageing on the Reproductive System</li> </ul>
<p><b>Module 5: Genetics, control and homeostasis</b></p> <ul style="list-style-type: none"> <li>Patterns of inheritance</li> <li>Population genetics and epigenetics</li> <li>Gene technologies</li> <li>The nervous system</li> <li>Monitoring visual function</li> <li>Effects of ageing on nervous system</li> <li>Homeostasis</li> <li>Hormonal control of blood glucose</li> <li>Kidney function and malfunction</li> </ul>	<p><b>F225 Module 1: Genetics in the Twenty First Century</b></p> <ul style="list-style-type: none"> <li>Inheritance of Human Genetic Disease</li> <li>Genetic Techniques</li> <li>Counselling Individuals on Genetic Issues</li> <li>Transplant Surgery and Cloning</li> </ul> <p><b>F225 Module 2: The Nervous System</b></p> <ul style="list-style-type: none"> <li>Monitoring Visual Function</li> <li>Treating Central Nervous System Injuries</li> <li>Modifying Brain Function</li> </ul> <p><b>F225 Module 3: Homeostasis</b></p> <ul style="list-style-type: none"> <li>The Importance of Homeostasis</li> <li>Managing Type 1 and Type 2 Diabetes</li> <li>Urine Production</li> </ul>



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	<ul style="list-style-type: none"> <li>• Treating Kidney Disease</li> </ul> <p><b>F225 Module 4: The Third Age</b></p> <ul style="list-style-type: none"> <li>• The Effects of Ageing on other Body Systems</li> </ul>
<p><b>Appendix 5d: Mathematical requirements</b></p> <ul style="list-style-type: none"> <li>• Arithmetic and numerical computation</li> <li>• Handling data</li> <li>• Algebra</li> <li>• Graphs</li> <li>• Geometry and trigonometry</li> </ul>	<p><b>Appendix E: Mathematical requirements</b></p> <ul style="list-style-type: none"> <li>• Arithmetic and numerical computation</li> <li>• Handling data</li> <li>• Algebra</li> <li>• Graphs</li> </ul>
<p><b>Note: although the topic areas are very similar the details of what is required differ. Please read appendix 5d in the Biology B specification carefully to ensure your students are fully prepared for their assessments.</b></p>	



## Assessment

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<p><b>AS Paper 1: Foundations of Biology Modules 1-3</b></p> <p>50% of AS</p> <p>Written paper 1 hour 30 minutes</p> <p>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><b>AS Unit F221: Molecules, Blood and Gas Exchange</b></p> <p>30% of AS</p> <p>Written paper 1 hour</p> <p>60 marks</p>
<p><b>AS Paper 2: Biology in Depth, Modules 1-3</b></p> <p>50% of AS</p> <p>Written paper 1 hour 30 minutes</p> <p>70 marks</p> <p>Short structured questions and extended response questions, problem solving, calculations, practical and theory.</p>	<p><b>AS Unit F222: Growth, Development and Disease</b></p> <p>50% of AS</p> <p>Written paper 1 hour 45 minutes</p> <p>100 marks</p> <p>Advance notice element</p>
	<p><b>AS Unit F223: Practical Skills in Human Biology</b></p> <p>20% of AS</p> <p>Controlled Assessment</p> <p>40 marks</p>
<p><b>A Level Paper 1: Fundamentals of Biology Modules 1-5</b></p> <p>41% of A level</p> <p>Written paper 2 hours 15 minutes</p> <p>110 marks</p> <p>Section A multiple choice questions, 30 marks. Section B short structured questions, and extended response questions, problem</p>	<p><b>A2 Unit F224: Energy, Reproduction and Populations</b></p> <p>15% of A level</p> <p>Written paper 1 hour</p> <p>60 marks</p>



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<p>solving, calculations, practical and theory 80 marks.</p>	
<p><b>A Level Paper 2: Scientific Literacy in Biology Modules 1-5</b> 37% of A level Written paper 2 hours 15 minutes 100 marks</p> <p>Advance notice article (underpins 20-25 marks). Short structured questions and extended response questions, problem solving, calculations, practical and theory.</p>	<p><b>A2 Unit F225: Genetics, Control and Ageing</b> 25% of A level Written paper 1 hour 45 minutes 100 marks</p>
<p><b>A Level Paper 3: Practical Skills in Biology Modules 1–5</b> 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><b>A2 Unit F226: Extended Investigation in Human Biology</b> 10% of A level Controlled Assessment 40 marks</p>

