

**Year 10 Curriculum Overview [2022-2023]**  
**Subject – Biology Separate Science**

Autumn Term	Knowledge & Understanding			Literacy Skills  Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components  [includes understanding of KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
<b>HT1</b>	B1 Key concepts in Biology	<ul style="list-style-type: none"> <li>• Testing foods</li> <li>• Enzymes</li> <li>• Transporting substances</li> </ul>	KS3 review <ul style="list-style-type: none"> <li>• Animal/plant and specialised cells</li> <li>• Food tests</li> <li>• Microscopes</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation of Core practicals</li> </ul>	<ul style="list-style-type: none"> <li>• Food industry</li> <li>• Microbiologist</li> </ul>	
	B2 Cells and Control	<ul style="list-style-type: none"> <li>• Cell division</li> <li>• Cell growth</li> <li>• Cell specialisation</li> <li>• The Nervous system</li> <li>• The Brain and eye</li> </ul>	<ul style="list-style-type: none"> <li>• Specialised cells</li> <li>• Eyes</li> <li>• Organ systems</li> </ul>	Presenting work on the Reflex Arc Extended writing – specialised cells, synapses, reflex arc,	<ul style="list-style-type: none"> <li>• Neuroscientist</li> <li>• Medicine</li> <li>• Optician</li> </ul>	
<b>HT2</b>	B3 Genetics	<ul style="list-style-type: none"> <li>• Meiosis</li> <li>• DNA Structure</li> <li>• Protein synthesis</li> <li>• Genetic variants and phenotypes</li> <li>• Mendel</li> <li>• Alleles</li> <li>• Inheritance</li> <li>• Multiple and missing alleles</li> <li>• Gene Mutation</li> <li>• Variation</li> </ul>	<ul style="list-style-type: none"> <li>• Y9 Review DNA Structure and Variation</li> </ul>	Role of Meiosis in reproduction.	<ul style="list-style-type: none"> <li>• DNA analysis</li> <li>• Geneticists</li> <li>• Medical scientists</li> </ul>	<b>Assessment point 1</b> Key Biological Concepts, Cells and control



<p><b>HT4</b></p>	<p>B4 Natural Selection and Genetic modification</p> <p>B5 Health, disease and the development of medicines</p>	<ul style="list-style-type: none"> <li>• Evidence of Evolution</li> <li>• Darwin's theory</li> <li>• Development of Darwin's theory</li>   <li>• Health and disease</li> <li>• Non-communicable diseases</li> <li>• Cardiovascular disease</li> <li>• Pathogens</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Y9 Review Evolution</li> <li>• Selective Breeding</li> <li>• Genetic Engineering</li> </ul>	<p>Evaluating processes</p>	<ul style="list-style-type: none"> <li>• Decision making skills</li> <li>• Zoologist</li> <li>• Evolutionary Biologist</li> </ul>	
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## Year 10 Curriculum Overview [2022-2023]

### Subject – Biology Separate Science

Summer Term	Knowledge & Understanding			Literacy Skills  Opportunities for developing literacy skills	Employability Skills [if any]	Assessment Opportunities
	Composites	Components  [includes understanding of KEY concepts & subject specific vocab]	Formal Retrieval [if any]			
<b>HT5</b>	B5  Health, disease and the development of medicines	<ul style="list-style-type: none"> <li>Spreading pathogens</li> <li>Virus life cycles</li> <li>Plant defences</li> <li>Plant diseases</li> <li>Physical and chemical barriers</li> <li>The immune system</li> <li>Antibiotics</li> <li>Monoclonal antibodies</li> </ul>	<ul style="list-style-type: none"> <li>Drugs and disease</li> </ul>	<ul style="list-style-type: none"> <li>Extended writing: Explaining how immunisation offers protection</li> </ul>	<ul style="list-style-type: none"> <li>Immunologist</li> <li>World Health Organisation Scientific advisor</li> </ul>	
	EXAM PREPARATION PAPER 1					
<b>HT6</b>	B6 Plant structures and their functions	<ul style="list-style-type: none"> <li>Photosynthesis</li> <li>Factors that affect Photosynthesis</li> <li>Core Practical – Light Intensity and Photosynthesis</li> <li>Transpiration &amp; Translocation.</li> </ul>	<ul style="list-style-type: none"> <li>KS3 Plant growth and Reproduction</li> <li>Photosynthesis review Trends in data</li> </ul>	<p><b>Extended writing focus:</b></p> <ul style="list-style-type: none"> <li>Evaluation – how to improve results / modify investigations – apply knowledge of CP to elodea practical.</li> <li>Explain how mineral ions are transported in plants. Explain how</li> </ul>	<ul style="list-style-type: none"> <li>Ecologist</li> <li>Botanist</li> </ul>	

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