

Learning Programme A-level Biology A OCR 2018-2019

St Ambrose College Upper 6th

Topic/Content	Objectives/Skills from gov.org	Homework	Assessment	Success Criteria OCR Biology A	Stretch & Challenge (Thirst for Learning)
<p>Progress will be according to the teaching group needs as teachers will use differentiated approaches to tailor delivery appropriately.</p> <p>Below is expected topic delivery timing.</p> <p><u>First half term</u> <u>Teacher 1</u> <u>AD/KR</u> Complete Unit 3 Start Unit 6</p> <p><u>Teacher 2 LW</u> Complete Unit 5</p>	<p><b>A level Biology must encourage students to:</b></p> <ul style="list-style-type: none"> <li>• develop essential knowledge and understanding of different areas of Biology and how they relate to each other</li> <li>• develop and demonstrate a deep appreciation of the skills, knowledge and understanding of scientific methods</li> <li>• develop competence and confidence in a variety of practical, mathematical and problem solving skills</li> <li>• develop their interest in and enthusiasm for biology, including developing an interest in further study and careers associated with biology</li> <li>• understand how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society</li> </ul>	<p>Pupils need to spend at least one hour per week consolidating their class work for every hour they have a lesson in school. This involves using their class notes, Kerboodle online resources and senecalearning.com as a minimum.</p> <p>Pupils will also be set topic appropriate tasks and work either on past examination questions to be completed at</p>	<p><b>Tasks listed below will be teacher assessed with diagnostic feedback provided. These tasks are to be carried out under exam conditions in lessons. All tasks are Exam Board questions or Exam Board practical skills assessments. If pupils are absent for these assessments, if time permits they will complete them upon their return ASAP before data reporting is completed.</b></p> <p><b>These will be used to form judgements/interim grades. Final grades will be based using these and the end of unit tests, and end of year examinations.</b></p>	<p><b><u>Grade A</u></b></p> <p><b><u>Knowledge and Understanding</u></b></p> <p>Candidates at this level could normally:</p> <ul style="list-style-type: none"> <li>• recall a wide range of the content from all areas of the specification</li> <li>• use detailed knowledge and understanding to explain scientific systems and phenomena, and apply this to novel situations where these were presented to them</li> <li>• select and use appropriate scientific terminology in their descriptions and explanations</li> <li>• select, organise and present information in an ordered and logical manner</li> <li>• show an understanding of the wider implications of science, including its benefits and drawbacks.</li> </ul>	<p>Biology Clinic Monday lunchtime rm 2207</p> <p>Access to Kerboodle resources and online textbook</p> <p>Resources on school shared area for boys to stretch and challenge themselves</p> <p>Free access to senecalearning.com which uses intelligent algorithms and mind palace skills and is an excellent accelerated learning platform</p> <p>Boys have access to the online school archive of Biological Sciences Review magazines from 1993-date via Dynamic Learning to improve</p>

<p>Complete remaining PAG practical sets Unit 4 begin</p> <p><u>Second half term</u></p> <p><u>Teacher 1 AD/KR</u></p> <p>Unit 6</p> <p><u>Teacher 2 LW</u></p> <p>Unit 4</p> <p><u>Christmas break</u></p> <p><u>Third half term</u></p> <p><u>Teacher 1 AD/KR</u></p> <p>Unit 6</p> <p><u>Teacher 2 LW</u></p> <p>Unit 4</p>	<p><b>Assessment overview</b></p> <p>The entire A level course content is in six modules:</p> <ul style="list-style-type: none"> <li>• Module 1: Development of practical skills in biology- both L6th &amp; U6th</li> <li>• Module 2: Foundations in biology- L6th taught &amp; reviewed U6th</li> <li>• Module 3: Exchange and transport- L6th taught &amp; reviewed U6th</li> <li>• Module 4: Biodiversity, evolution and disease- U6th taught and reviewed</li> <li>• Module 5: Communication, homeostasis and energy- L6th taught &amp; reviewed U6th</li> <li>• Module 6: Genetics, evolution and ecosystems- U6th taught and reviewed</li> </ul> <p>All components include synoptic assessment.</p> <p>Students must complete all components (01, 02, 03, and 04) to be awarded the OCR A Level in Biology A.</p> <p><b>Content Overview</b></p>	<p>home or as formal assessment within lessons.</p>	<p><b>Other tasks will be set in lessons and homework that will be self or peer assessed, and the marks will be recorded. These will be appropriate to the teaching group and the topic being delivered at the time.</b></p> <p><u>First half term</u></p> <p>Part 1 of Paper 1 2018</p> <p>Part 2 of Paper 1 2018</p> <p>PAG10</p> <p><u>Second half term</u></p> <p>Part 1 relevant exam questions from Paper 2</p> <p>Part 2 relevant exam questions from Paper 2</p> <p>Research PAG12</p> <p><u>Christmas break</u></p> <p><u>Third half term</u></p>	<p><b><u>Application of knowledge and understanding, analysis, synthesis and evaluation</u></b></p> <p>Candidates at this level could normally:</p> <ul style="list-style-type: none"> <li>• plot graphical data accurately, and describe trends in data</li> <li>• perform complex calculations involving more than one step</li> <li>• interpret and analyse data presented to them and relate this to their knowledge and understanding of content in the specification</li> <li>• understand the development of scientific ideas</li> <li>• sequence scientific concepts and processes in a logical and orderly manner</li> <li>• use extended writing in their responses to questions.</li> </ul> <p><b><u>Experiment and Investigation</u></b></p> <p>Candidates at this level could normally:</p> <ul style="list-style-type: none"> <li>• plan and safely carry out investigations based on a sound</li> </ul>	<p>their independent learning skills</p> <p>All boys will be given the opportunity to join the University of Manchester Library</p> <p>Biology Society every week where boys choose topics to present to their peers, and prepare for Q &amp; A sessions after their presentation</p> <p>Boys can visit MOSI museum</p> <p>Boys can visit the Science Department Library in rm 2207 1-130pm Monday, Tuesday and Friday to view books available. If they wish to borrow books they will need to see Mrs White (HOD) to sign them out/in</p> <p>Boys can plan activities for the KS3 Science</p>
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<p><u>Fourth half term</u></p> <p><u>Teacher 1 AD/KR</u></p> <p>Review Unit 1,2,3,6</p> <p><u>Teacher 2 LW</u></p> <p>Ensure all PAGs complete and pupils informed of Pass/Fail for Practical Endorse</p> <p>Review all units</p> <p><u>Easter break</u></p> <p><u>Fifth half term</u></p> <p><u>Teacher 1 AD/KR</u></p> <p>Exam practise</p> <p><u>Teacher 2 LW</u></p>	<p>Content is in six modules, each divided into key topics:</p> <p><b>Module 1: Development of practical skills in biology</b></p> <ul style="list-style-type: none"> <li>• Practical skills assessed in a written examination</li> <li>• Practical skills assessed in the practical endorsement</li> </ul> <p><b>Module 2: Foundations in biology</b></p> <ul style="list-style-type: none"> <li>• Cell structure</li> <li>• Biological molecules</li> <li>• Nucleotides and nucleic acids</li> <li>• Enzymes</li> <li>• Biological membranes</li> <li>• Cell division, cell diversity and cellular organisation</li> </ul> <p><b>Module 3: Exchange and transport</b></p> <ul style="list-style-type: none"> <li>• Exchange surfaces</li> <li>• Transport in animals</li> <li>• Transport in plants</li> </ul> <p><b>Module 4: Biodiversity, evolution and disease</b></p>		<p><b>Mock using relevant Paper 1,2 &amp; 3 questions Mock tbc/3/19 PAG11</b></p> <p><b>Statistics and maths question focus from Mock performance</b></p> <p><u>Fourth half term</u> Sets of relevant exam questions based on Paper 2 and 3</p> <p>Past papers</p> <p><u>Easter break</u></p> <p>Past papers</p> <p><u>Fifth half term</u></p> <p>Past papers</p> <p><u>Sixth half term</u></p> <p>External exams</p>	<p>knowledge and understanding of the specification content</p> <ul style="list-style-type: none"> <li>• interpret their results fully, using a variety of techniques</li> <li>• evaluate the results of their investigations and the methods used</li> <li>• produce a wide range of relevant results and use appropriate statistical techniques to analyse them.</li> </ul> <p><b><u>Synthesis of knowledge, understanding and skills</u></b></p> <p>Candidates at this level could normally:</p> <ul style="list-style-type: none"> <li>• produce sophisticated responses to questions, drawing on the scientific knowledge and understanding set out in the specification</li> <li>• apply their knowledge and understanding successfully to unfamiliar contexts and data</li> </ul> <p><b><u>OCR Assessment Objectives</u></b></p> <p><b><u>A01</u></b></p> <p>Demonstrate knowledge and understanding of scientific ideas,</p>	<p>Society run on Thursday lunchtimes, for younger boys or the KS4 Biology Clinic run on Tuesday lunchtimes, or the KS5 Biology clinic run on Monday lunchtimes</p>
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<p>Exam practise</p> <p><u>Sixth half term</u></p> <p><u>Teacher 1</u> <u>AD/KR</u></p> <p>Exam practise</p> <p><u>Teacher 2 LW</u></p> <p>Exam practise</p> <p>Three external exams based on</p> <p><b>Biological processes (Paper1)</b> <b>Marks: 100</b> <b>Duration: 2 hours 15 mins</b> <b>Weighting: 37%</b> Assesses content from modules 1, 2, 3 and 5</p> <p><b>Biological diversity (Paper2)</b> <b>Marks: 100</b></p>	<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> <p><b>Module 5: Communication, homeostasis and energy</b></p> <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> <p><b>Module 6: Genetics, evolution and ecosystems</b></p> <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> <p>Students gain practical skills throughout the course. These are assessed in the written examinations and in the practical endorsement (component 4).</p>			<p>processes, techniques and procedures</p> <p>30-35% at A-level</p> <p><u>A02</u></p> <p>Apply knowledge and understanding of scientific ideas, processes, techniques and procedures:</p> <ul style="list-style-type: none"> <li>in a theoretical context</li> <li>in a practical context</li> <li>when handling qualitative data</li> <li>when handling quantitative data</li> </ul> <p>40-45% at A-level</p> <p><u>A03</u></p> <p>Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to:</p> <ul style="list-style-type: none"> <li>make judgements and reach conclusions</li> </ul>	
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<p><b>Duration:</b> 2 hours 15 mins <b>Weighting:</b> 37% Assesses content from modules 1, 2, 4 and 6</p> <p><b>Unified biology (Paper3)</b> <b>Marks:</b> 70 <b>Duration:</b> 1 hour 30 mins <b>Weighting:</b> 26% Assesses content from all modules (1 to 6)</p> <p><b>Practical endorsement in biology (4)-L6th &amp; U6th</b> Pass/Fail by March of U6th Non-exam assessment</p>	<p>Activities that could count towards the practical endorsement are indicated in the specification</p> <p><b><u>External exam details for end of U6th</u></b></p> <p><b>Biological processes (Paper1)</b> <b>Marks:</b> 100 <b>Duration:</b> 2 hours 15 mins <b>Weighting:</b> 37% Assesses content from modules 1, 2, 3 and 5</p> <p><b>Biological diversity (Paper2)</b> <b>Marks:</b> 100 <b>Duration:</b> 2 hours 15 mins <b>Weighting:</b> 37% Assesses content from modules 1, 2, 4 and 6</p> <p><b>Unified biology (Paper3)</b> <b>Marks:</b> 70 <b>Duration:</b> 1 hour 30 mins <b>Weighting:</b> 26% Assesses content from all modules (1 to 6)</p> <p><b>Practical endorsement in biology (4)-L6th &amp; U6th</b> Pass/Fail by March of U6th Non-exam assessment</p>			<ul style="list-style-type: none"> <li>• develop and refine practical design and procedures</li> </ul> <p>25-30% at A-level</p>	

