



Biology	Working towards expected outcomes	Working at expected outcomes	Working beyond expected outcomes
<p>Y13 OCR Biology A</p> <p><u>Autumn Term</u> respiration, respiration investigation, genetics of living systems, patterns of inheritance and variation, neuronal communication, hormonal communication, communication and homeostasis.</p> <p><u>Spring Term</u> patterns of inheritance and variation, manipulating genomes, cloning and biotechnology, communication and homeostasis, plant responses,</p>	<p>Your child is not yet making the expected progress within this course.</p> <p>Students working <b>towards</b> expected outcomes in Year 13 can:</p> <p><b>Understanding Knowledge</b></p> <ul style="list-style-type: none"> <li>• demonstrate a partial knowledge and understanding of some of the scientific ideas, processes, techniques and procedures covered so far in the specification.</li> </ul> <p><b>Applying knowledge/synoptic skills</b></p> <ul style="list-style-type: none"> <li>• select information from the specification that is often relevant to questions, with opportunities to further develop accuracy and scientific understanding.</li> <li>• communicate simple information using simpler scientific terminology.</li> <li>• apply scientific knowledge, principles and concepts in familiar contexts that involve handling qualitative data.</li> <li>• give explanations that lack structure but are mostly complete.</li> <li>• show partial evidence of appropriate technical language and scientific terms in unfamiliar contexts.</li> <li>• show a limited ability to select information and ideas from different parts of the specification to provide simple explanations in synoptic questions.</li> </ul>	<p>Your child is achieving the expected progress for this point within the course.</p> <p>Students working <b>at</b> expected in Year 13 can:</p> <p><b>Understanding Knowledge</b></p> <ul style="list-style-type: none"> <li>• demonstrate a solid understanding of most scientific concepts, processes, techniques, and procedures covered up to this point in the specification.</li> </ul> <p><b>Applying knowledge/synoptic skills</b></p> <ul style="list-style-type: none"> <li>• consistently choose information from the specification that is relevant to answering questions, with a growing understanding that supports improving scientific accuracy.</li> <li>• communicate relevant information using appropriate scientific terminology.</li> <li>• apply scientific knowledge, principles and concepts in familiar contexts that may involve several steps in the argument when handling qualitative data.</li> <li>• give explanations that are mostly complete but may lack links to other areas of the specification.</li> <li>• show a secure ability to select information and ideas from different parts of the specification to provide explanations.</li> <li>• show a secure ability to select information and ideas from different parts of the specification to provide explanations in synoptic questions.</li> </ul>	<p>Your child is exceeding the expected progress.</p> <p>Students working <b>beyond</b> expected in Year 13 can:</p> <p><b>Understanding Knowledge</b></p> <ul style="list-style-type: none"> <li>• exhibit an in-depth and thorough mastery of the scientific concepts, methodologies, techniques, and procedures covered within the specification to date.</li> </ul> <p><b>Applying knowledge/synoptic skills</b></p> <ul style="list-style-type: none"> <li>• effectively identify and extract key details from the specification that are highly relevant to addressing the given questions, ensuring clear and focused responses.</li> <li>• organise and concisely communicate information using appropriate scientific terminology.</li> <li>• use scientific knowledge, principles, and concepts to efficiently answer both familiar and new contexts, encompassing multi-step reasoning when analysing and interpreting qualitative data.</li> <li>• give explanations that are coherent, well-structured and cover multiple aspects of the specification.</li> <li>• use appropriate technical language and scientific terms in unfamiliar contexts. This language will always be appropriate to the answer.</li> <li>• select and link information and ideas from different parts of the specification to give explanations that are complete and accurate in synoptic questions.</li> </ul>



<p>ecosystems, populations and sustainability.</p>	<p><b>Mathematical skills</b></p> <ul style="list-style-type: none"><li>• carry out simple calculations for numerical data.</li><li>• carry out accurately, some of the stages in calculations involving multiple steps but may not record answers to the required number of decimal places.</li></ul> <p><b>Practical endorsement skills</b></p> <ul style="list-style-type: none"><li>• show scientific reasons for using the simpler practical procedures, such as the qualitative tasks, mentioned in the specification.</li><li>• predict the outcome of practical procedures in familiar contexts.</li><li>• select information and evidence to form conclusions that may not reflect the complete range of evidence available</li><li>• partially justify a judgement or conclusion using some statistical information</li><li>• analyse evidence and information from familiar contexts with partial accuracy selecting appropriate techniques drawn from theoretical and practical areas of the specification.</li><li>• interpret and evaluate ideas, information and evidence using largely accurate explanations involving simple phenomena.</li><li>• draw on knowledge and understanding from the specification to begin suggesting how a</li></ul>	<p><b>Mathematical skills</b></p> <ul style="list-style-type: none"><li>• carry out simple calculations with no guidance for numerical and graphical data.</li><li>• carry out accurately, most of the stages in calculations involving multiple steps and have some appreciation of the appropriate precision required.</li></ul> <p><b>Practical endorsement skills</b></p> <ul style="list-style-type: none"><li>• show a range of the scientific reasons for using the practical procedures and equipment mentioned in the specification so far. Explanations will be linked to precision of equipment and reliability of results.</li><li>• predict the results of experiments in both familiar and new situations by using knowledge and logical thinking.</li><li>• select information and evidence from qualitative and quantitative data to form conclusions that reflect most of the range of evidence available.</li><li>• partially justify a judgement or conclusion using any given statistical information.</li><li>• analyse evidence and information from familiar contexts with accuracy selecting appropriate techniques drawn from theoretical and practical areas of the specification covered so far.</li><li>• interpret and evaluate ideas, information and evidence using accurate explanations involving simple phenomena linking ideas from several areas of the course.</li></ul>	<p><b>Mathematical skills</b></p> <ul style="list-style-type: none"><li>• carry out simple calculations effectively and with appropriate precision for both graphical and numerical data. Answers will always be quoted to the relevant decimal places.</li><li>• carry out complex quantitative calculations involving multiple steps yielding results that are error free and expressed to an appropriate precision.</li><li>• show an ability to structure multiple step calculations so that each step occurs in a logical sequence.</li></ul> <p><b>Practical endorsement skills</b></p> <ul style="list-style-type: none"><li>• demonstrate a firm grasp of the scientific reasons for using the full range of practical procedures mentioned in the specification so far, justifying the choices of equipment in terms of precision and reproducibility of results.</li><li>• hypothesise the outcomes of experiments and investigations in both familiar and new scenarios by applying knowledge and logical reasoning.</li><li>• select appropriate information and evidence from quantitative and qualitative data to reach a complete and detailed conclusion.</li><li>• fully justify a judgement or conclusion using any given statistical information.</li><li>• analyse, with fluency and accuracy, information and evidence that is provided in a wide variety of unfamiliar contexts selecting a full range of appropriate techniques involving theoretical and practical areas of the specification covered so far.</li><li>• interpret and evaluate ideas, information and evidence using accurate and give detailed explanations of complex phenomena linking ideas from all areas of the course.</li></ul>
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	<p>simple system may behave when its parameters change.</p> <ul style="list-style-type: none"><li>• demonstrate some understanding of the specification and begins to apply this knowledge to develop and refine practical designs and procedures, considering one or two key factors</li><li>• suggest and make observations and measurements with sufficient precision and record these with only minor errors.</li><li>• begin to explore a range of issues in synoptic contexts, using developing arguments that show emerging fluency and balance.</li></ul>	<ul style="list-style-type: none"><li>• apply knowledge and understanding from the specification to predict how a system behaves when its parameters change.</li><li>• use knowledge and understanding of the specification in a clear way to develop and refine practical designs and procedures considering most of the factors affecting the investigation.</li><li>• suggest and make observations and measurements with sufficient precision and record these to the right level of decimal places for the task.</li><li>• discuss issues in synoptic contexts, using arguments that are generally well-developed, balanced, and coherent.</li></ul>	<ul style="list-style-type: none"><li>• exhibit deep understanding through insightful analysis of how variations in parameters influence system behaviour</li><li>• use knowledge and understanding to demonstrate insight into the development and refinement of practical designs and procedures; such insights will be wide ranging and will cover most areas of the design or procedure.</li><li>• propose and carry out detailed observations and quantitative measurements employing suitable levels of precision and systematically document the results in a methodical and accurate manner.</li><li>• confidently discuss a comprehensive range of issues in synoptic contexts, demonstrating strong subject knowledge, fluency of expression, and well-balanced, insightful arguments.</li></ul>
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