

## Y10 Triple Biology – SOL 2020-21

<u>Time</u>	<u>Content</u>	<u>Required Practical Skills</u>
<b>HT1</b>	<p><b><u>Plant disease</u></b> (4.3.3, 4.3.3.1, 4.3.3.2)</p> <ul style="list-style-type: none"> <li>• Plant diseases TMV and Rose Blackspot Ion deficiency</li> <li>• Plant defences (physical and chemical)</li> <li>• Infection and response triple test</li> </ul> <p><b><u>The brain:</u></b> (4.5.2.2)</p> <ul style="list-style-type: none"> <li>• Brain structure and function</li> <li>• Studying the brain (Higher)</li> <li>• Evaluate methods to study the brain</li> <li>• The brain test</li> </ul>	
<b>HT2</b>	<p><b><u>The eye</u></b> (4.5.2.3)</p> <ul style="list-style-type: none"> <li>• Eye structure</li> <li>• Iris reflex</li> <li>• Accommodation</li> <li>• Correcting vision defects</li> <li>• Compare iris reflex with accommodation</li> <li>• Eye test</li> </ul>	
<b>HT3</b>	<p><b><u>Food production and biotechnology RECAP</u></b> (4.7.5, 4.7.5.1 - 4.7.5.4)</p> <ul style="list-style-type: none"> <li>• Efficiency of food production</li> <li>• Mycoprotein</li> <li>• GM Crops pros cons</li> <li>• Genetic engineering – insulin</li> <li>• Biomass, food and biotechnology test.</li> </ul>	
<b>HT4</b>	<p><b><u>Homeostasis</u></b> (4.5.2.4) &amp; (4.5.3.3)</p> <ul style="list-style-type: none"> <li>• Controlling body temperature</li> <li>• Controlling blood sugar (CS)</li> <li>• Controlling water content</li> <li>• PPQ application</li> <li>• Kidney failure/transplants</li> <li>• Homeostasis test</li> </ul>	
<b>HT5</b>	<p><b><u>Plant hormones</u></b> (4.5.4.1, 4.5.4.2)</p> <ul style="list-style-type: none"> <li>• Tropisms</li> <li>• <b>RP8 Investigate the effect of light or gravity on the growth of newly germinated seeds. Planning opportunity.</b></li> <li>• Uses of plant hormones</li> <li>• Application</li> <li>• Plant hormones test</li> </ul>	<p><b>RP8 Investigate the effect of light or gravity on the growth of newly germinated seeds.</b></p> <p>Planning Record length and time Observations of biological specimens to produce labelled scientific drawings. Suggest improvements and further investigations.</p>

		<p><b>Application:</b>  <i>Practical write up and questions from CPG workbook on RP8</i></p>
<b>HT6</b>	<p><b><u>Monoclonal antibodies RECAP</u></b>  <b>(4.3.2 , 4.3.2.1,4.3.2.2)</b></p> <ul style="list-style-type: none"> <li>• Antibodies</li> <li>• Production of monoclonal antibodies</li> <li>• Uses and problems of monoclonal antibodies</li> </ul>	
	<ul style="list-style-type: none"> <li>• Catch up and consolidate learning</li> </ul>	
<b>HT7</b>	<p><b><u>DNA structure and protein synthesis (4.6.1.5)</u></b></p> <ul style="list-style-type: none"> <li>• Nucleotide polymer</li> <li>• ACGT Bases</li> <li>• Sequences - 3 bases for one amino acid</li> <li>• Protein Synthesis</li> <li>• Genes and phenotype</li> <li>• Importance of structure in proteins</li> <li>• Mutations</li> <li>• Non-functional enzymes</li> <li>• Non-coding DNA</li> </ul> <p><b><u>Reproduction (4.6.1.3)</u></b></p> <ul style="list-style-type: none"> <li>• Sexual reproduction (CS)</li> <li>• Insect pollination (KS3)</li> <li>• Asexual reproduction (CS)</li> <li>• Advantages of sexual and asexual reproduction</li> <li>• Reproducing using both methods</li> </ul>	<p><b><u>Oracy and Ipad:</u></b>  <i>Create a stop motion video to explain protein synthesis.</i></p> <p><b><u>Exam practice:</u></b>  <i>Questions on DNA, protein synthesis and GM insulin</i></p>
<b>HT8</b>	<p><b><u>Cloning (4.6.2.5)</u></b></p> <ul style="list-style-type: none"> <li>• Cloning plants</li> <li>• Cloning animals</li> <li>• Issues surrounding cloning</li> <li>• Comparing and evaluating cloning techniques</li> <li>• Reproduction and cloning test</li> </ul>	
<b>HT9</b>	<p><b><u>Theory of evolution (4.6.3.1)</u></b></p> <ul style="list-style-type: none"> <li>• Theory of evolution &amp; Darwin natural selection</li> <li>• New discoveries and controversy</li> <li>• Lamarck and compare theories</li> <li>• Speciation &amp; Wallace</li> <li>• Theory of evolution test</li> </ul>	<p><b><u>Literacy extended writing:</u></b>  <i>Compare and contrast Darwin and Lamarck</i></p> <p><b><u>Exam practice:</u></b>  <i>Questions on natural selection and speciation</i></p>

<b><u>HT10</u></b>	<b><u>Required Practical</u></b> <ul style="list-style-type: none"><li>• Required practical revision</li><li>• The eye</li><li>• Homeostasis</li><li>• Biomass</li></ul>	
<b><u>HT11</u></b>	<ul style="list-style-type: none"><li>• Protein synthesis</li><li>• Natural selection and speciation</li><li>• Genetic engineering</li></ul>	