

**Year 9 (4 hours per week)**

**Target:** To revisit the work you will have covered in class this year, including....

1. The structure and division of cells, the basic units of life.
2. The methods of cellular transport.

**Modification:** We will not be able to incorporate all of the practical elements of the course, however we can use videos and recording to illustrate key ideas.

All work updated on teams, or emailed to the teacher.

Week 1 focus: Cellular structure	<ol style="list-style-type: none"> <li>1. Video walking students Eukaryote/Prokaryote/Plant/Animal cells/Organelles.</li> <li>2. Students produce an annotated diagram, using biological drawing rules (Link to skills development).</li> <li>3. Students produce a Venn diagram to compare and contrast these domains.</li> </ol>
Week 2 focus: Specialised cells and differentiation	<ol style="list-style-type: none"> <li>1. Video demonstrating the key types of cell form and function.</li> <li>2. Students to produce – ‘a typical day in the life of....’ cartoon story board for each type of cell.</li> <li>3. Alternative – Students produce an annotated model/drawing of each type of cell (including function) and take a photograph.</li> </ol>
Week 3 focus: Magnification	<ol style="list-style-type: none"> <li>1. Video demonstrating to students how to use the magnification equation.</li> <li>2. 3 different magnification problems to complete independently, embedded in the video.</li> <li>3. Exam question to illustrate typicality in exam requirements.</li> </ol>
Week 4 focus: Cell division - Mitosis	<ol style="list-style-type: none"> <li>1. Video explaining chromosomal structure, the process and stages of mitosis and its place in the cell-cycle.</li> <li>2. Students complete an illustrated pneumonic to embed PMAT into memory.</li> <li>3. Pictorial recognition task, for students to recall each stage of mitosis.</li> </ol>
Week 5 focus: Stem cells	<ol style="list-style-type: none"> <li>1. Youtube video about what STEM cells are.</li> <li>2. Video about the uses of stem cells in medicine, including advantages and disadvantages of their use.</li> <li>3. Students use examples to produce an extended piece of writing about the advantages and disadvantages of stem cells in medicine.</li> </ol>
Week 6 focus: Transport in cells	<ol style="list-style-type: none"> <li>1. Video outlining diffusion theory.</li> <li>2. Video demonstrating osmosis practical and showing student how they can do this at home.</li> <li>3. Students can attempt the osmosis practical at home at take photographs of their results.</li> <li>4. Students complete a venn diagram comparing and contrasting diffusion and osmosis.</li> </ol>
Week 7 – CTG	<p>Task 1 - Students complete a keyword challenge activity to recap the key terms associated with the topic above.</p> <p>Task 2 – Students should answer a series of questions to time, to see how well they are able to apply knowledge in an exam question setting.</p>

**Year 10 Biology (4 hours per week)**

**Target:** To revisit the work you will have covered in class this year, including....

1. The factors can affect the rate of photosynthesis and respiration.
2. The link between bioenergetics and homeostasis.

**Modification:** We will not be able to incorporate all of the practical elements of the course, however we can use videos and recording to illustrate key ideas.

Week 1 focus: Photosynthesis	<ol style="list-style-type: none"> <li>1. A video to illustrate photosynthesis and its importance for sustaining life on earth.</li> <li>2. Students should complete an exam question linked to photosynthesis and limiting factors.</li> <li>3. An explosion and shrinking exercise around the uses of glucose in plants. The end product being a 10 word (with images) mindmap.</li> </ol>
Week 2 focus: Respiration	<ol style="list-style-type: none"> <li>1. A Video guiding students through aerobic v's anaerobic respiration and metabolism.</li> <li>2. Students are to write a paragraph to compare and contrast aerobic v's anaerobic. Students should upload this on to MS Teams, or via email to their class teacher.</li> <li>3. Students should answer an exam question on respiration rate and metabolism.</li> </ol>
Week 3 focus: Homeostasis – Thermoregulation	<ol style="list-style-type: none"> <li>1. A Video explaining thermoregulation in context.</li> <li>2. Students complete a guided flow diagram to illustrate how temperature variations affect homeostasis.</li> </ol>
Week 4 focus: Homeostasis – Osmoregulation and Glucoregulation	<ol style="list-style-type: none"> <li>1. A video lesson outlining the process of osmo and glucoregulation.</li> <li>2. Students complete a flow diagram to illustrate these key processes.</li> <li>3. Students attempt an exam question, self-assess and upload questions not understood/answered onto teams for a discussion.</li> <li>4.</li> </ol>
Week 5 focus: The Nervous system	<ol style="list-style-type: none"> <li>1. A video lesson outlining the voluntary nervous pathway, followed by the reflex arc and its importance in an organism's survival.</li> <li>2. Students to produce a model of the nervous pathway (reflex arc), take a picture an upload it onto teams.</li> <li>3. Task 2 – students should write an explanation of the knee jerk reflex in their own words. Upload onto Teams or email.</li> </ol>
Week 6 focus: The Nervous system - Synapses	<ol style="list-style-type: none"> <li>1. A video lesson explaining the form and function of the synapse.</li> <li>2. Task 1 – Students complete a keyword glossary of key terms associated with the synapse and the nervous system.</li> </ol>
Week 7 – CTG	<p>Task 1 - Students complete a keyword challenge activity to recap the key terms associated with Photosynthesis, respiration and homeostasis.</p> <p>Task 2 – Students should answer a series of questions to time, to see how well they are able to apply knowledge in an exam question setting.</p>