

# Bellerive FCJ Catholic College



Department: Biology

Year Group: 10

Term	Learning Focus	Key Knowledge and Skills	Assessment	Challenge and Enrichment
1	B1 Cell Biology	<ul style="list-style-type: none"> <li>Students cover the fundamental units of life, focusing on the structure and function of eukaryotic (plant and animal) and prokaryotic (bacterial) cells, the importance of microscopy, cell transport processes (diffusion, osmosis, active transport), and cell division by mitosis.</li> <li>Students learn about stem cells and their use and their importance in medicine.</li> <li>Students learn how to calculate magnification and use and prepare microscope slides.</li> </ul>	<p>B1 EOU HW (H/F):  <a href="https://padlet.com/HACHScience/ks4-biology-zzee5t7h85z1/wish/AL83Wzlokv0XQ0Pg">https://padlet.com/HACHScience/ks4-biology-zzee5t7h85z1/wish/AL83Wzlokv0XQ0Pg</a></p> <p>Therapy, followed by B1 GCSEPOD</p>	<p>B1 Essential knowledge.</p> <p>Cell Biology Padlet <a href="#">Padlet Cell Biology</a></p> <p>Revision mats -  <a href="https://padlet.com/HACHScience/ks4-biology-zzee5t7h85z1/wish/LNV1Q72bBYgJamq3">https://padlet.com/HACHScience/ks4-biology-zzee5t7h85z1/wish/LNV1Q72bBYgJamq3</a></p> <p>Use the links to complete padlet tasks to support learning and cover essential knowledge.</p>
	B2 Organisation and the digestive system	<ul style="list-style-type: none"> <li>Students cover how the digestive system is an organ system that breaks down food into smaller molecules for absorption, focusing on the roles of organs like the mouth, stomach, small intestine, and accessory organs (liver, pancreas). Key concepts include <a href="#">mechanical digestion</a> (chewing), <a href="#">chemical digestion</a> (using enzymes like amylase, protease, and lipase), and the process of <a href="#">absorption</a> of nutrients into the bloodstream via the small intestine's <a href="#">villi</a>.</li> </ul>	<p>B2 EOU HW (H/F):  <a href="#">Exam questions Homework</a></p> <p>Therapy followed by B2 GCSEPOD</p>	<p>B2 Essential knowledge.</p> <p>Organisation and the digestive system Padlet link; <a href="#">Organisation Padlet</a></p> <p>Revision mats –  B2 – link <a href="#">Organisation Revision mat</a></p> <p>Use the links to complete padlet tasks to support learning and cover essential knowledge.</p> <p><a href="https://www.sciencejournalforkids.org/articles/how-do-groups-of-ants-make-shared-decisions/">https://www.sciencejournalforkids.org/articles/how-do-groups-of-ants-make-shared-decisions/</a></p> <p>Use the above link to explore ants and their decisions from the sciencejournalforkids.org</p>

		<ul style="list-style-type: none"> <li>Students learn about factors that affect an enzyme's action and learn to calculate and measure a rate of reaction.</li> </ul>		Use it to explore further ideas on how animal physiology enables communication and survival.
2	B3 Infection and response	<ul style="list-style-type: none"> <li>Students need to know about pathogens (viruses, bacteria, fungi, protists), how they spread (air, water, direct contact), and human/plant defence mechanisms like the immune system and physical/chemical defences. Key concepts include vaccination, the use of antibiotics, monoclonal antibodies, and understanding drug development through testing for toxicity, efficacy, and dose in trials.</li> </ul>	<p>B3 EOU HW (H/F):  <a href="#">Homework questions for infection and response</a></p> <p>Therapy followed by B3 GCSEPOD</p>	<p>B3 Essential knowledge.  Infection and response Padlet link;  <a href="#">Infection and response padlet</a></p> <p>Revision mats-  <a href="#">Revision mat for Infection and Response</a></p> <p>Use the links to complete padlet tasks to support learning and cover essential knowledge.</p>
3	<p>B4 Bioenergetics:  Photosynthesis</p> <p>Respiration</p>	<ul style="list-style-type: none"> <li>Students learn about energy transfer in living organisms and focus on two key processes: photosynthesis in plants and respiration in all organisms.</li> <li>Students learn how to use the inverse square law and how to measure the rate of reaction of photosynthesis</li> <li>Photosynthesis uses light energy to make glucose, while respiration releases the energy from glucose for biological functions.</li> </ul> <ul style="list-style-type: none"> <li>There are two types of respiration: aerobic (using oxygen) and anaerobic (without oxygen), which has different products and energy yields depending on the organism.</li> </ul>	<p>B4 EOU HW (H/F):  <a href="#">Bioenergetics Homework questions</a></p> <p>Therapy followed by B4 GCSEPOD</p>	<p>B4 Bioenergetics Padlet link;  <a href="#">Bioenergetics padlet</a></p> <p>Use the link to review the bioenergetics topic and the essential knowledge within the topic.</p> <p>Revision mats-  <a href="#">Bioenergetics revision mat link</a></p> <p>Use the links to complete padlet tasks to support learning and cover essential knowledge. Use for revision.</p>

	<ul style="list-style-type: none"> <li>Students learn how exercise affects the body and respiration.</li> <li>Students learn what is meant by metabolism and the factors that affect an organism's metabolic rate.</li> </ul> <p>Start Y11 content : Ecosystems</p> <ul style="list-style-type: none"> <li>The importance of communities: Know what is meant by a stable community, know how organisms are adapted to the conditions in which they live, Know the relationship between communities and ecosystems.</li> <li>Organisms in their environment: Students develop knowledge of the factors that affect communities (Abiotic and Biotic Factors)</li> <li>Distribution and Abundance: Measure the Population Size of a common species in a habitat, estimate population sizes using random sampling with quadrats, know how to measure the distribution of living things in their natural environment, know how finding the mean, median and the mode can help you understand your data.</li> <li>Competition in animals: learn why animals compete, learn the factors animals are competing for in a habitat, learn how organisms are adapted to the environment they live in, learn</li> </ul>		
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	<p>what makes an animal a successful competitor.</p> <ul style="list-style-type: none"><li>• Competition in plants: learn what plants compete for, learn how plants compete, develop knowledge of the adaptations that plants have to make them successful competitors.</li></ul>		
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