

Bellerive FCJ Catholic College
KS3 Scheme of Learning 2020 – Reviewed March 2020 – AMB/GR

KS3 Unit Overview – Big Picture

Subject/Year group/Unit Title	Big picture questions	Pupils will focus particularly on the following statements from the programme of study:
<p>Biology/ Year 8B/ Environment</p> <p>Lessons:</p> <ol style="list-style-type: none"> 1. Life processes 2. Photosynthesis 3. Limiting factors 4. Water flow 5. Adaptations of plants 1 6. Adaptations of plants 2 7. Surface area v light intensity 8. Products from plants 9. Farming for food 10. Farming problems 11. Food chains and webs 12. Feeding relationships 13. Competition and survival 14. Communities and Populations 15. Revision 16. End of topic test 	<p>How do natural processes and human activities affect the Earth’s atmosphere?</p> <p>How are cells and organisms adapted for survival?</p> <p>In what ways are organisms in competition with and dependent on other organisms?</p>	<p>BMP1: reactants in, and products of, photosynthesis, and the word equation for photosynthesis</p> <p>BMP2: the dependence of almost all life on Earth on the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of oxygen and carbon dioxide in the atmosphere</p> <p>BMP3: the adaptations of leaves for photosynthesis</p> <p>BMC2: a word summary for aerobic respiration</p> <p>CEa5: The carbon cycle</p> <p>BIR1: the interdependence of organisms in an ecosystem, including food webs and insect pollinated crops</p> <p>BIR2: The importance of plant reproduction through insect pollination in human food security</p> <p>BIR3: how organisms affect, and are affected by, their environment including the accumulation of toxic materials.</p>
<p>Assessment tasks</p>	<p>As FCJ educators, we will focus on the FCJ values by:</p>	<p>We will ensure students skills in reading, writing, communication and mathematics are enhanced by:</p>

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<p>Presenting data graphically (Lesson 3) ISA style investigation - Ivy (Lesson 7) Extended writing – Organic farming (Lesson 10) 8B summative assessment (Lesson 15)</p>	<p>Companionship- collaborative practical activities and group work. Dignity/Justice/Hope- discussions relating to world food supply, farming practices, human impact on environment.</p>	<p>Paired reading, letter writing, internet research, scientific investigation: data collection, presentation, analysis, interpretation</p>
<p>We are supporting progression from KS2 in this unit by:</p>	<p>We are supporting progression to KS4 in this unit by:</p>	<p>Misconceptions and how they will be addressed</p>
<p>Developing explanations of how specialised cells, tissues and organs in plants function to support the seven life processes in a healthy organism</p> <p>Linking food chains within a habitat to produce food webs.</p> <p>Build on understanding of food chains to describe communities and populations, pyramids of number, predator-prey relationships, energy flow and biomass.</p>	<p>Providing opportunities to use evidence to develop conflicting arguments for and against the effect of a human activity on the biosphere, e.g. farming.</p> <p>Modelling for pupils how to question the validity and reliability of data so that they can evaluate evidence</p> <p>Creating opportunities for pupils to explore the impact of human activities on the cycling of nutrients, e.g. growing crops and the carbon cycle.</p> <p>Using a range of instruments to collect data.</p> <p>Planning opportunities for discussion about global concerns, e.g. world food supply.</p> <p>Encouraging pupils to develop models to explain the complex interactions between systems as they cope with stressful environmental conditions, e.g. lack of water and other essential nutrients.</p>	<p>Plants get food from the soil. Plants breathe.</p>

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