

Each topic will cover the key enquiry processes, relevant maths skills and cultural capital.

CL = Careers Links which supports the Catholic Social Teaching (CST) strand of Dignity of Work and Participation



HT1:	HT2:	Assessment	HT3:	HT4:	Assessment	HT5
<p>INTENT <u>Ecology 4.7</u> In this section we will explore how humans are threatening biodiversity as well as the natural systems that support it.</p> <p>CST Common Good and Solidarity - Looking after our planet for future generations. Conserving energy resources, sustainable food production. Reducing carbon footprint by shopping local and reducing food miles, supporting local farmers. Interrelationships and biodiversity on a local and global scale, e.g. deforestation issues.</p> <p>Delivered in the warmer months for fieldwork</p> <p>Link to Geog The Living World (human impacts in the tropical rainforests)</p> <p>Careers - Ecologist, Marine Biologist, Conservationist, Sustainability Officer.</p>	<p>INTENT <u>Inheritance, Variation and Evolution 4.6</u> We will discover how the number of chromosomes are halved during meiosis and then combined with new genes from the sexual partner to produce unique offspring.</p> <p>CST Dignity – Each one of us is unique and beautiful and created in God’s image. People with living with genetic disorders deserve dignity.</p> <p>Link to non-communicable diseases in 4.3</p> <p>CL- Genetic counsellor and palaeontologist</p> <p><u>Organic Chemistry 5.7</u> The chemistry of carbon compounds is so important that it forms a separate branch of chemistry. We learn that a great variety of carbon compounds is possible because carbon atoms can form chains and</p>	<p>Students will be assessed by a series of end of topic tests followed by a larger MOCK assessment at the end of the term.</p>	<p>INTENT <u>Forces 6.5</u> We learn about forces and their interactions, forces in motion and Newton’s Laws of Motion.</p> <p>CL- Engineer</p> <p><u>Chemistry of the Atmosphere 5.9</u> We learn that the Earth’s atmosphere is dynamic and forever changing. The causes of these changes are sometimes man-made and sometimes part of natural cycles.</p> <p>CST Creation and the Environment – Consider how are actions are accelerating climate change</p> <p>Link to Ecology and Organic Chemistry</p> <p>CL- Environmental Officer, Vehicle Maintenance, energy analyst, Geologist.</p>	<p>INTENT <u>Homeostasis and Response 4.5</u> We learn the structure and function of the nervous and hormonal system.</p> <p>CST Dignity – People who receive fertility treatment have a right to dignity.</p> <p>Link to forces (reaction times)</p> <p>CL - Neurosurgeon, Optician, Dietician, Nephrologist.</p> <p>MOCK EXAMS commence w/c 27/11/23</p>	<p>Students will be assessed by a series of end of topic tests followed by a second MOCK or interleaved paper at the end of HT3.</p>	<p>INTENT <u>Magnetism 6.7</u> We learn about permanent and induced magnetism and how a magnet moving in a coil can produce electric current and also that when current flows around a magnet it can produce movement.</p> <p>CL- Rail Technician, Sound Engineer Radiologist, Auto Engineer</p> <p><u>Chemical Analysis 5.8</u> We learn about the range of qualitative tests to detect specific chemicals. Instrumental methods as a means of analysing the composition of chemicals.</p> <p>Link to particle model and energy changes</p> <p>CL- Environmental Officer Forensics, Glass Artist Skincare Scientist.</p> <p><u>Using Resources 5.10</u> Industries use the Earth’s natural resources to</p>



<p>Rate and Extent of Chemical Change 5.6 We learn that whilst the reactivity of chemicals is a significant factor in how fast chemical reactions proceed, there are many variables that can be manipulated in order to speed them up or slow them down. We learn that some reactions are reversible and the yield can vary depending on the conditions.</p> <p>Link to energy changes Link to organisation (enzymes as catalysts) Link to limiting factors in Bioenergetics (Year 10)</p> <p>CL- Pollution Prevention Control Officer, Chemical Engineer, Technician, Materials Scientist.</p> <p>Waves 6.6 We learn how waves carry energy from one place to another and how they carry information.</p> <p>Link to atomic structure</p>	<p>rings linked by C-C bonds.</p> <p>CST Peace – The limited reserves of fossil fuels can lead to conflict between countries.</p> <p>Link - DNA as a polymer in inheritance</p> <p>CL- Petroleum engineer, Offshore drilling worker.</p> <p>Forces 6.5 We learn about forces and their interactions, forces in motion and Newton's Laws of Motion.</p> <p>Link to homeostasis and response (reaction times)</p> <p>CL- Engineer</p>					<p>manufacture useful products. In this topic, we learn that in order to operate sustainably, chemists seek to minimise the use of limited resources, use of energy, waste and environmental impact in the manufacture of these products. Chemists also aim to develop ways of disposing of products at the end of their useful life in ways that ensure that materials and stored energy is utilised.</p> <p>CST Option for the Poor – Acknowledging that people in developing countries are affected more by the extraction of raw materials and disposal of waste from developed countries. Reduce, reuse and recycle will reduce these impacts.</p> <p>Link to chemistry of the atmosphere</p> <p>CL- Environmental Chemist, Waste management.</p>
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CURRICULUM MAP – Year 11 COMBINED SCIENCE

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ST JAMES'
CATHOLIC HIGH SCHOOL

KEY
Biology
Chemistry
Physics

(Year 10) and taught before 5.9

CL- Audiologist, acoustic Engineer, Seismologist, Optometrist, Sound Engineer, Lighting Designer.