

CURRICULUM MAP – Year 11 TRIPLE SCIENCE
 Each topic will cover the key enquiry processes, relevant maths skills and cultural capital. See corresponding schemes of work for more detail.



ST JAMES'
 CATHOLIC HIGH SCHOOL

KEY
 Biology
 Chemistry
 Physics

HT1:	HT2:	Assessment	HT3:	HT4:	Assessment	HT5
<p>INTENT Ecology 4.7 In this section we will explore how humans are threatening biodiversity as well as the natural systems that support it. We also learn the factors which speed up the rate of decay and sustainable food production.</p> <p>Delivered in the warmer months for fieldwork</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.</p> <p>Link to energy changes Link to organisation (enzymes as catalysts) Link to limiting factors in Bioenergetics</p>	<p>INTENT Waves 6.6 We learn how waves carry energy from one place to another and how they carry information, including deflection of waves and sound waves. Link to atomic structure and taught before 5.9</p> <p>Space We learn about our solar system, the life cycle of a star and how the red shift theory helps us to understand how the universe is expanding.</p> <p>Chemical Analysis 5.8 We learn about the range of qualitative tests to detect specific chemicals, including how to test for ions. Link to particles</p> <p>Inheritance, Variation and Evolution 4.6 We study DNA structure, cloning and the theories of evolution and speciation. Link to non-communicable diseases in 4.3</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 Organic Chemistry 5.7 We learn that a great variety of carbon compounds is possible because carbon atoms can form chains and rings linked by C-C bonds. We also learn about alkenes, alcohols and polymers. Link to enzymes, DNA as a polymer and inheritance</p> <p>Forces 6.5 We learn about forces and their interactions, forces in motion, Newton's Laws of Motion and Momentum. We learn about moments, levers and gears, pressure differences in fluids and atmospheric pressure. Link to homeostasis and response (reaction times)</p>	<p>INTENT Chemistry of the Atmosphere 5.9 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 many natural cycles.</p> <p>Homeostasis and Response 4.5 We learn the structure and function of the nervous and hormonal system. Students also study the brain and the eye as two sensory organs and also the control of body temperature and water and nitrogen balance. We also learn about plant hormones. Link to forces (reaction times)</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 Magnetism 6.7 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. We learn about Fleming's Left Hand Rule and the Motor Effect.</p> <p>Using Resources 5.10 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 products. Chemists also aim to dispose of products at the end of their useful life in ways that ensure that materials and stored energy is utilised. We study the Haber Process. Link to chemistry of the atmosphere</p>