Curriculum Summary Documents
Year 11 Combined Science

Module/Unit of Learning	Taught During (Half term)	What will students learn?	How does this deepen understanding and enrich experience?	Links to other Subjects
B7 Ecology	**Autumn 1**	• Classification of living organisms • Adaptations, interdependence and competition • Organisation of an ecosystem • How materials are cycled • Biodiversity and the effect of human interaction on ecosystems	Apply sampling techniques learnt in the classroom to a different habitat.	**Geography** **Animal care**
B5 Homeostasis	**Autumn 1**	• The human nervous system • Hormonal coordination in humans	Students have covered the basics of nerve cell adaptations, menstrual cycle and hormones throughout Y7, 8 and 9 and this is built upon.	**Child Development** **PSHE**
B6 Inheritance, variation and evolution	**Autumn 2**	• Reproduction • The development of understanding of genetics and evolution	History of The Genome Project. Students will follow the evolution of MRSA and antibiotic resistant bacteria outbreaks in local Cornish hospitals.	**Child Development** **PSHE**
C6 Rates of reaction	**Autumn 2**	• Rate of reaction • Reversible reactions and dynamic equilibrium	Using practical tasks and observations develops students' scientific skills and provides opportunities for them to think more like a scientist.	**Mathematics**
C7 Organic Chemistry	**Autumn 2**	• Carbon compounds as fuels and feedstock	Students apply their knowledge of fractional distillation and cracking to be able to compare them. Students are also taught how to write and balance symbol equations showing cracking. Knowledge of covalent molecules from the previous module is used to deepen students understanding.	**Geography**

C8 Chemical Analysis	**Spring 1**	• Purity, formulations and chromatography • Identification of common gases	Students can apply these techniques to real life scenarios and careers. This module helps students to develop a range of analytical skills.	**Mathematics**
C9 **Atmosphere**	**Spring 1**	• The composition and evolution of the Earth's atmosphere • Carbon dioxide and methane as greenhouse gases • Common atmospheric pollutants and their sources	Students will have the opportunity to discuss and research how human activities impact the atmosphere and the Earth's natural resources.	**Geography** **Physics**
C10 **Resources**	**Spring 1**	• Using the Earth's resources and obtaining potable water • Life cycle assessment and recycling	Students explore how human activities impact the atmosphere and the Earth's natural resources. We will also discuss how we can be more sustainable.	**Geography**
P5 **Forces**	**Spring 2**	• Forces and their interactions • Work done and energy transfer • Forces and elasticity • Forces and motion • Momentum (HT only)	Application of knowledge to real world examples such as a skydiver or Usain Bolt's 100m world record requires a higher level of understanding.	**Mathematics** **GCSE PE**
P6 **Waves**	**Spring 2**	• Waves in air, fluids and solids • Electromagnetic waves	Application of EM waves to wider uses requires a higher level of understanding.	**Mathematics** **Music** **Child Development**
P7 **Magnetism**	**Summer 1**	• Permanent and induced magnetism, magnetic, forces and fields • The motor effect	Applying knowledge to everyday uses requires a high level of understanding. Some students will also use and manipulate the F=BIL equation.	**Mathematics**
Summer 1 **Revision and preparation for GCSE exams**				