KS4 curriculum map – Science Year 11 Triple Award

	Topic	**Key concept – what do I want the students to learn from this unit?**	**What knowledge will they acquire?**
YEAR 11 OVERVIEW			
Y11 - half term 1	Classification Ecology	Classification of Living organisms. Adaptations, Interdependence and competition	• Classification of Living organisms • Communities • Abiotic factors • Biotic factors • Adaptations
	Using resources	Using the Earth's resources and obtaining potable water	• Using the Earth's resources and sustainable development • Potable water • Waste water treatment • Alternative methods of extracting metals
	Electromagnetic waves Magnetism	Electromagnetic waves Permanent and Induced magnetism, magnetic forces and fields	• Types of electromagnetic waves • Properties of electromagnetic waves • Uses and applications of electromagnetic waves • Lenses • Visible light • Black body radiation • Poles of a magnet • Magnetic fields
Y11 – half term 2	Biodiversity	Organisation of an ecosystem Biodiversity and the effect of human interaction on ecosystems	• Levels of organisation • How materials are cycled • Decomposition • Impact of environmental change • Biodiversity • Waste management • Land use • Deforestation • Global warming • Maintaining biodiversity • Trophic levels in an ecosystem • Food production

	Topic	Key concept – what do I want the students to learn from this unit?	What knowledge will they acquire?
	Using resources	Life cycle assessment and recycling Using materials The Haber process and the use of NPK fertilisers	• Life cycle assessment • Ways of reducing the use of resources • Corrosion and its prevention • Alloys as useful materials • Ceramics, polymers and composites • The Haber process • Production and use of NPK fertilisers
	Electromagnets	The motor effect	• Electromagnetism • Flemings left hand rule • Electric motors • Loudspeakers • Induced potential • Use of the generator effect • Microphones • Transformers • Our solar system
	Space Physics	Solar system; stability of orbital motions, satellites	• The life of a star • Orbital motion , natural and artificial satellites • Red shift
	FORMAL ASSESSMENT		
Y11– half term 3	Required practicals Maths Extended writing		
Y11 – half term 4	Required practicals Maths Extended writing		
FORMAL ASSESSMENT			
	Revision		
Y11 – half term 5	Revision		
Y11 – half term 6	**GCSE EXAMS**		