Year 11 Entry Level Certificate Science Curriculum End Points and Key Vocabulary

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Unit of Work	1. Component 4: Chemistry in our World 2. Component 6: Electricity, Magnetism and Waves	1. Component 4: Chemistry in our World 2. Component 6: Electricity, Magnetism and Waves	1. ESA Preparation 2. Portfolio Development 3. Biology, Chemistry and Physics Review	1. Synoptic Science 2. Scientific Investigations 3. ESA Completion	1. Final Assessment Completion 2. Scientific Enquiry 3. Transition and Progression	
Ethos links	1. **Sustainability**: Understanding climate change, pollution and responsible use of resources. 2. **STEM**: Understanding communication technologies and environmental science.	1. **STEM**: Applying scientific understanding to real-world environmental and technological issues. 2. **Personal Development:** Developing independence through portfolio completion.	1. **Personal Development:** Developing resilience, organisation and independent learning skills. 2. **STEM:** Applying knowledge from Biology, Chemistry and Physics to assessment tasks.	1. **Personal Development:** Reflection, resilience and preparation for certification. 2. **STEM**: Communicating scientific understanding effectively.	1. **Careers** Progression into further education, training and employment.	
Learning End Points By the end of this unit students will know and understand:	**Component 4: Chemistry in our World** - Describe the composition of the atmosphere today. - Explain how Earth's atmosphere has changed over time. - Describe what crude oil is - Explain how crude oil is separated by fractional distillation. - Describe complete and incomplete combustion. - Explain the environmental impacts of combustion products. **Component 6: Electricity, Magnetism and Waves** - Describe how electromagnets are used in everyday life. - Identify transverse and longitudinal waves.	**Component 4: Chemistry in our World** - Describe air pollution and its causes. - Explain how air pollution can be reduced. - Describe the greenhouse effect. - Explain the relationship between greenhouse gases and climate change. - Define potable water and desalination. - Explain water purification processes. - Evaluate life cycle assessments. **Component 6: Electricity, Magnetism and Waves** - Describe the electromagnetic spectrum.	- Consolidate knowledge from all six ELC Science components. - Recall and apply scientific vocabulary accurately. - Explain scientific concepts using appropriate command words. - Apply scientific knowledge in unfamiliar contexts.	- Review and reinforce knowledge across Biology, Chemistry and Physics. - Address misconceptions identified through assessment. - Apply scientific understanding to a range of contexts.	- Demonstrate secure scientific knowledge across the ELC Science specification. - Reflect on strengths and areas for development.	

	- Describe wavelength, frequency and amplitude. - Calculate wave speed. - Describe the electromagnetic spectrum.	- Explain uses of electromagnetic waves. - Describe hazards associated with electromagnetic radiation. - Explain how infrared radiation is absorbed and emitted by different surfaces.				
Key vocabulary	**Component 4: Chemistry in our World** Atmosphere Crude Oil Fractional Distillation Hydrocarbon Combustion Carbon Monoxide Carbon Dioxide Pollution Greenhouse Effect Climate Change Carbon Footprint Potable Water Desalination Filtration Sterilisation Life Cycle Assessment Sustainability **Component 6: Electricity, Magnetism and Waves** Electromagnet Solenoid Magnetic Field Wave Transverse Longitudinal Wavelength Frequency Amplitude Wave Speed Electromagnetic Spectrum Radio Wave Microwave Infrared Visible Light Ultraviolet	**Component 4: Chemistry in our World** Atmosphere Hydrocarbon Combustion Carbon Monoxide Carbon Dioxide Pollution Greenhouse Effect Climate Change Carbon Footprint Potable Water Desalination Filtration Sterilisation Life Cycle Assessment Sustainability **Component 6: Electricity, Magnetism and Waves** Electromagnet Solenoid Magnetic Field Wave Transverse Longitudinal Wavelength Frequency Amplitude Wave Speed Electromagnetic Spectrum Radio Wave Microwave Infrared Visible Light Ultraviolet X-ray Gamma Ray	**Synoptic Vocabulary** Analyse Explain Evaluate Interpret Reliability Validity Evidence Conclusion	**Synoptic Vocabulary** Trend Pattern Variable Method Investigation Scientific Enquiry	**Synoptic Vocabulary** Progression Achievement Communication	

	X-ray Gamma Ray Radiation Communication	Radiation Communication				