Year 11 - Science						
Curriculum intent	All students will develop knowledge which helps them in their own lives and to understand the world in which they live. Students will be confident with their knowledge, allowing them to inform others and to problem solve through scientific enquiry. To prepare students for the future they will be curious and equipped to question and challenge information they are presented with. Through the curriculum, key themes of knowledge are revisited each year, with the knowledge being developed over time. The themes link to biology, chemistry and physics and are carefully sequenced in order to ensure that students have all of the powerful knowledge needed to move onto the next theme. This will ensure that students develop a secure long-term memory over time with flexible knowledge that can be applied to different contexts.					
Term	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Knowledge	**Biology Topic 7 Ecology** learn how different parts of an ecosystem interact with each other and the effects that humans have on the environment **Chemistry Topic 3 Quantitative Chemistry** understand chemists use quantitative analysis to determine the formulae of compounds and the equations for reactions. **Chemistry Topic 4 Chemical Changes**	**Biology Topic 5 Homeostasis and Response** use a range of investigative techniques to understand that cells in the body can only survive within narrow physical and chemical limits. **Chemistry Topic 6 The Rate and Extent of Chemical Change** use a range of investigative techniques to understand chemical reactions	**Biology Topic 6 Inheritance, Variation and Evolution** use a range of investigative techniques to discover how the number of chromosomes are halved during meiosis and then combined with new genes from the sexual partner to produce unique offspring. **Chemistry Topic 7 Organic Chemistry** understand the chemistry of	**Biology Topic 6 Inheritance, Variation and Evolution** use a range of investigative techniques to discover how the number of chromosomes are halved during meiosis and then combined with new genes from the sexual partner to produce unique offspring. **Chemistry Topic 10 Using Resources** use a range of investigative techniques to understand industries use the Earth's natural	Revision and GCSE Exams begin	GCSE Exams end

	understand chemical changes began when people began experimenting with chemical reactions in a systematic way and organising their results logically. **Chemistry Topic 8 Chemical Analysis** learn how chemists analyse substances to prove purity **Physics Topic 5 Forces** use a range of investigative techniques to understand that engineers analyse forces when designing a great variety of machines and instruments, from road bridges and fairground rides to atomic force microscopes.	**Physics Topic 5 Forces** use a range of investigative techniques to understand that engineers analyse forces when designing a great variety of machines and instruments, from road bridges and fairground rides to atomic force microscopes.	carbon compounds is so important that it forms a separate branch of chemistry. **Physics Topic 6 Waves** use a range of investigative techniques to understand waves carry energy from one place to another and can also carry information.	resources to manufacture useful products. **Physics Topic 7 Magnetism and Electromagnetism** use a range of investigative techniques to understand that electromagnetic effects are used in a wide variety of devices. **Physics Topic 8 Space** use a range of investigative techniques to understand how stars are formed and die, and analyse the evidence for the Big Bang (Triple Science only)		
Skills	Graph drawing Method writing	Calculation	Evaluation Method writing	Suggestion Risk assessment	Method writing	n/a

		Description and explanation			Description and explanation	
Assessments	Mastery Recall Tasks each half term Mastery Application tasks each topic: Biology – describe a method Chemistry – calculate a value Physics – describe a method	Biology paper 1, Chemistry paper 1 and Physics paper 1 mock exams during the Year 11 mock exam period. Mastery Application tasks each topic: Biology – evaluate a method Chemistry – describe a method Physics – calculate a value	Mastery Recall Tasks each half term Mastery Application tasks each topic: Biology – calculate a value Chemistry – explain a process Physics – draw a graph	Biology paper 2, Chemistry paper 2 and Physics paper 2 mock exams during lesson time. Mastery Application tasks each topic: Biology – calculate a value Chemistry – evaluate a resource Physics – suggest a hypothesis & compare two processes	n/a	n/a
Curiosity	Books: CPG AQA revision guide and workbooks World of Science https://www.amazon.co.uk/World-Science-Various/dp/1842368036/ref=sr_1_1?s=books&ie=UTF8&qid=1432298879&sr=1-1 Science in the news: https://www.iflscience.com/ https://theday.co.uk/ https://www.bbc.co.uk/news/science_and_environment					