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 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 8 Chemical Analysis** use a range of investigative techniques to	**Biology Topic 7 Ecology** use a range of investigative techniques to understand all species live in ecosystems composed of complex communities of animals and plants dependent on each other and that are adapted to particular conditions, both abiotic and biotic. **Chemistry Topic 10 Using Resources** use a range of	**Biology Topic 7 Ecology** use a range of investigative techniques to understand all species live in ecosystems composed of complex communities of animals and plants dependent on each other and that are adapted to particular conditions, both abiotic and biotic. **Chemistry Topic 10 Using Resources** use a range of investigative techniques to understand industries use the Earth's natural resources to	Revision	

	Chemistry Topic 7 Organic Chemistry use a range of investigative techniques to understand the chemistry of carbon compounds is so important that it forms a separate branch of chemistry. can occur at vastly different rates. **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.	understand analysts have developed a range of qualitative tests to detect specific chemicals. **Chemistry Topic 9 Chemistry of the Atmosphere** use a range of investigative techniques to understand 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. **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.	investigative techniques to understand industries use the Earth's natural 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.	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		

Skills	Modelling and simulation techniques. Working scientifically: developing scientific attitudes, experimental skills and investigations, analysis and evaluation and using a range of measurements.	Develop practical skills to use a microscopes to investigate scientific theories. Working scientifically: developing scientific attitudes, experimental skills and investigations, analysis and evaluation and using a range of measurements.	Working scientifically: developing scientific attitudes, experimental skills and investigations, analysis and evaluation and using a range of measurements. Maths skills – handling data, graphs and using units. Develop practical skills to investigate scientific theories.	Working scientifically: developing scientific attitudes, experimental skills and investigations, analysis and evaluation and using a range of measurements. Develop practical skills to investigate scientific theories. Maths skills – handling data, graphs and using units.	Working scientifically: developing scientific attitudes, experimental skills and investigations, analysis and evaluation and using a range of measurements. Maths skills – handling data, graphs and using units. Develop practical skills to investigate scientific theories.	Working scientifically: developing scientific attitudes, experimental skills and investigations, analysis and evaluation and using a range of measurements. Maths skills – handling data, graphs and using units. Develop practical skills to investigate scientific theories.
Assessments	End of topic tests for all topics to identify any areas of development.	End of topic tests for all topics to identify any areas of development. Biology paper 1, Chemistry paper 1 and Physics paper 1 mock exams during the Year 11 mock exam period.	End of topic tests for all topics to identify any areas of development.	End of topic tests for all topics to identify any areas of development. Mock Exams covering the modules taught. Biology paper 2, Chemistry paper 2 and Physics paper 2 mock exams during lesson time.	End of topic tests for all topics to identify any areas of development. Mock Exams covering the modules taught.	End of topic tests for all topics to identify any areas of development. Mock Exams covering the modules taught.
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