Year 11 Biology

Overall Intent:

- Maintain curiosity through exploring the ten Big Ideas of Science
- Learn key scientific vocabulary to aid understanding and communication of the topic being studied.
- Acquire the full range of skills to learn to apply knowledge, critique information and actively solve problems
- Have a science education to progress their understanding of the issues that shape their lives during and beyond their school years

In Year 11, students study 3 hours per fortnight of the Biology aspect of AQA GCSE Trilogy combined science worth 2 GCSEs or 5 hours of AQA GCSE Biology (a single GCSE but completed in combination with the single GCSEs of Physics and Chemistry). They continue to explore each of the ten Big Ideas of Science, focusing on the three Big Ideas in Biology. These centre around cells, genes and ecology where they build upon previous learning and expand their understanding of each idea. Students are provided with an essential learning list at the start of each topic and assessed on their recall of this list at the start of each lesson. Students are assessed throughout the topics using Demonstrate and Connect tasks. End of topic assessments focus on their ability to communicate their knowledge and understand key scientific concepts. Homework will be issued at regular intervals and may comprise worksheets, extended research or completing a skills grid following a practical investigation. Practical work is a key part of science and as well as completing numerous practical activities students will also be required to complete a series of required practicals, where they consolidate scientific concepts, develop transferable investigative skills and acquire a range of practical skills.

	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Topic/area of study	Complete Ecology and start Homeostasis and Response	Homeostasis and response	Inheritance, variation and evolution	Revision		
Key learning aims – knowledge and skills	. Students learn about the structure and interactions in ecosystems. Students learn how to monitor and measure biotic and abiotic factors that affect ecosystems. Students learn about biodiversity and the impact of human activity on biodiversity in both a positive and negative way.	Students learn how control systems sense changes and use effectors to bring about changes. They explore the structure and function of the nervous system and how it can bring about fast responses. They also explore the hormonal system which usually brings about much slower changes. Students develop an understanding of the role of hormones in reproduction and the roles of contraceptive drugs	Students learn about sexual and asexual reproduction and how genes are inherited. Students explore a range of genetic disorders and how chromosomes control inheritance. Students learn about evolution, natural selection and how scientists have used selective breeding and genetic engineering to produce offspring			

		and also drugs which can increase fertility.				
Assessment	End of topic tests	Paper 1 Trial Exams	End of topic tests	Paper 2 Trial exams	Fri 10th May (AM) – biology paper 1	Fri 7th June (PM) – Biology paper 2