YEAR 8 SCIENCE

Overall Intent:

- Maintain curiosity through exploring the ten Big Ideas of Science
- 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 8, students study 6 hours per fortnight of science in mixed ability groups. They will be introduced to each of the ten Big Ideas of Science throughout the year as they complete units of work covering aspects of Biology, Chemistry, and Physics. In each unit, students carry out a range of practical activities and investigations. 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 least once per topic and may comprise extended research or completing a skills grid following a practical investigation. This course prepares students for continuing their scientific study into Year 9, GCSE and beyond.

	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Topic/area of study	Earth – Atmosphere Organisms – Tissues and Organs Matter – Periodic Table Forces - Motion	Organisms – Health and Disease Electromagnetism – Voltage and Energy	Forces – Non-contact forces Reactions – Acids and Redox	British Science Week Energy – Energy Stores Genes – Inheritance		Waves – Sound Organisms – Photosynthesis and respiration Ecosystems – Human impacts Reactions – Chemical energy
Key learning aims – knowledge and skills	Students study the historical evolution of our atmosphere and make conclusions about the causes and consequences of current climate change and pollution. They look at how cells come together to make tissues and organs, how and why elements are	Students build upon knowledge of circuits by adding concepts of voltage and energy. They learn the components and importance of a balanced diet and the effects of recreational drugs	Students study gravity in the context of how objects move in space. They then investigate chemical reactions and start to understand the movement of atoms in such reactions	Students will be involved in British Science week in march. They then look at the transfer of energy through different stores and how features are inherited through DNA and the theory of evolution.		Students investigate sound waves and compare them to previously studied light waves. They look in detail at reactions in plant and animal cells before assessing the impact Humans have on the environment. Finally, they look at chemical reactions in

	organised in the periodic table and how forces affect the motion of objects.					terms of the energy required or released.
Assessment	End of Topic Tests	End of Topic Tests	AP1 exams		AP2 Exams	End of Topic Tests