

Science

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Curriculum Intent: To ensure students maintain and develop their curiosity and excitement about the natural world. To develop all to be 'scientists' by embedding a culture of confidence and mastery underpinned by scientific enquiry. To develop their ability to see connections between science subject areas and become aware of some of the big ideas for understanding the world and to provide a high challenge, high quality science education for all our learners

	Core Knowledge			Procedural Knowledge
	Biology	Chemistry	Physics	
Autumn 1	Cells and microscopy	Atomic Structure	Molecules and matter	Students will: Select, plan, and carry out the most appropriate scientific enquiries to test predictions. Identify independent, dependent and control variables. Use appropriate techniques, apparatus and materials during field work and lab work, paying attention to health and safety. Pay attention to objectivity and concern for accuracy, precision, repeatability, reproducibility. Explain data in relation to predictions and hypotheses. Understand that scientific theories are modified to take account of new evidence. Understand importance of publishing results and peer review.
Autumn 2	Transport across membranes	Atomic Structure	Energy transfer by heating	
Spring 1	Cell cycle	The Periodic Table	Radioactivity	
Spring 2	Digestion and enzymes	Chemical Analysis	Radioactivity Energy resources	
Summer 1	Transport in animals	Chemical Analysis	Energy resources	
Summer 2	Transport in animals	Chemical Analysis	Energy resources [Introduction to electricity]	

Homework:

Students will receive homework for every six hours that they are taught.
Students will be provided with a homework booklet that contains a different activity to complete for each homework. Tasks will include revision activities, past exam questions, knowledge organisers and vocab builders.

Assessment:

Several Low Stake Assessments (LSAs) across the year. These will consist of approximately 15 marks of past exam questions.
There are also two assessment weeks.
The November assessment will cover the Biology topic on Cells and Microscopy, the Chemistry topic on Atomic Structure and the Physics topic on Molecules and matter.
The June assessment will cover the Biology topic(s) on Cells, Microscopy, Transport across membranes and Digestion, the Chemistry topics on Atomic Structure, The periodic table and testing

for gases and the Physics topics on Molecules and matter, Energy transfer by heating and Radioactivity.

Links to Personal Development:

Enabling students to recognise risks to their own wellbeing.

Social development: Practise using a range of social skills in different situations.

Confidence, Resilience and Knowledge: Mentally healthy, physically healthy, active lifestyle, healthy relationships.

How is my knowledge developed further at GCSE?

The Science curriculum is a spiral. Every topic is revisited and built upon. All ultimate knowledge from one year or key stage becomes the proximal knowledge for the next year or Key Stage.