

Physics

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Curriculum Intent: To ensure students maintain and develop their curiosity and excitement about the natural world. To develop all students 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. To provide a high challenge, high quality Science education for all our learners.

	Core Knowledge		Procedural Knowledge
	Y10	Y11	
Half term 1	Electrical circuits Electricity in the home	Wave properties [Revision for assessment]	- Ask scientific questions and form testable hypotheses using physics ideas. - Plan and carry out experiments safely, choosing the right equipment and methods. - Collect and record data accurately, then present it clearly in tables, graphs, or charts. - Analyse results using maths and statistics, including identifying patterns and estimating uncertainty. - Draw conclusions based on evidence and suggest ways to improve investigations. - Apply physics knowledge to explain real-world technologies and everyday phenomena. - Use models and scientific language to explain ideas clearly. - Understand that science has limits and consider its impact on society and the environment.
Half term 2	[Revision for assessment] Conservation and dissipation of energy	Electromagnetic waves Light	
Half term 3	Forces in balance	[Revision for assessment] Electromagnetism	
Half term 4	Motion [Revision for assessment]	Electromagnetism Space	
Half term 5	Forces in motion	Space Revision and exam preparation	
Half term	Forces in motion Force and pressure		

Homework:

One homework will be set for every four hours of learning and take approximately 45 minutes to complete. Physics homework will be set using Educake, an online learning platform designed to support students in developing their knowledge and understanding of science. Students will be set quizzes based on what they are learning in lessons or on topics that they need to revise for an assessment. The quizzes are automatically marked giving students instant feedback so they can see where they have done well and where they need to improve. This will reinforce what they have learnt in lessons, identify gaps in their knowledge early, build confidence through regular practice and prepare effectively for assessments and exams. Students can log into Educake using their school email and password and can complete their work on any internet-enabled device (computer, tablet, or smartphone).

Assessment:

Exam board: AQA

In Y10 there will be 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 exam will cover Kerboodle Topic 2 (modules P4-7) and the exam in April will include Kerboodle Topic 1 & Topic 2 (modules P1-7).

In Y11 there will be 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 October exam will cover Kerboodle Topic 1 & Topic 2 (modules P1-7). The exam in February will include Kerboodle Topic 3 & the majority of Topic 4 (modules P8-14).

Links to Personal Development:

GCSE Physics supports students' personal development by helping them understand how science links to real-life decisions, personal wellbeing and wider society. Through topics such as energy, electricity, forces, radiation and medical applications of physics, students learn to recognise risks, consider safety and make informed choices based on evidence. Practical work and problem-solving activities help students develop confidence, resilience and independence, while also encouraging collaboration, clear communication and the use of social skills in different situations. Physics also promotes curiosity, responsibility and an understanding of how scientific knowledge can improve lives, support healthy choices and help students engage thoughtfully with the modern world.

How is my knowledge developed further at Key Stage Five?

Knowledge and skills gained through the study of GCSE Physics are an excellent starting point for further study at KS5. The GCSE Physics course builds on the core concepts learnt at KS3, adding the level of detail and complexity needed to access KS5. A Level Physics begins by exploring further all aspects of forces and motion, electrical circuits and waves as an extension to the GCSE content. The course then goes into more depth with quantum physics, applications of Newtonian physics, astrophysics, particles and medical physics.