

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] | <ul style="list-style-type: none"> 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 6 | 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. 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:

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:

Enabling students to recognise risks to their own wellbeing.

Social development: Practise using a range of social skills in different situations. Confidence, Resilience & Knowledge: Mentally healthy, physically healthy, active lifestyle, healthy relationships.

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.