

Key Stage 5

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| <p>Curriculum Aims</p> <ul style="list-style-type: none"> ▪ To encourage independent learners, listeners and thinkers ▪ To provide enjoyable courses, that will stimulate interest and enthusiasm in Physics and develop an interest in further study and careers associated with the subject ▪ To develop essential knowledge and understanding of different areas of the subject and how they relate to each other ▪ To develop competence and confidence in a variety of practical, mathematical and problem-solving skills ▪ To develop and demonstrate a deep appreciation of the skills, knowledge and understanding of scientific methods ▪ To understand how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society | <p>What will you see in physics lessons?</p> <ul style="list-style-type: none"> ▪ Students will build on skills that they have learnt at Key Stage 4 ▪ Students will be encouraged to be inspired, motivated and challenged by the key ideas in Physics and start to make links between them ▪ Students will develop their understanding of models to describe key concepts ▪ Students will perform regular practical activities to develop their experimental methods and analytical techniques for analysing empirical data ▪ Students will further develop their problem-solving skills by combining and manipulating mathematical equations from different topics within the course ▪ Students will communicate their ideas using scientific terminology. | <p>What will you see in students' Physics folders?</p> <ul style="list-style-type: none"> ▪ Checklists ▪ Notes on key concepts and equations ▪ Practise calculations ▪ Experimental write ups which contributes towards the Practical Endorsements ▪ Worksheets ▪ Practise past paper questions ▪ Revision notes, mind maps or worksheets. ▪ Half-termly tests and self-evaluation forms. |
| <p>Curriculum Content and sequencing</p> <p>Year 12 Development of practical skills in Physics Foundations of Physics Forces and Motion Electricity Waves Quantum Physics Medical Physics Circular Motion</p> <p>Year 13 Thermal Physics Oscillations Gravitational Fields Astrophysics and Cosmology Capacitance Electric Fields Electromagnetism Nuclear and Particle Physics</p> | <p>What formative assessment will you see in physics?</p> <ul style="list-style-type: none"> ▪ Weekly homework assignments ▪ At the end of half term the students will sit a test or past paper which contains exam style questions which are marked by the teacher. Students are then provided with a breakdown of their marks according to topic and command word before completing a self-evaluation form. ▪ At least 12 investigations which contribute towards the practical endorsement. ▪ Students have a mock exam at the end of Y12 and in January of Y13. | <p>What is the faculty currently reading and discussing and why?</p> <p>We are currently reading: Classroom Physics (a publication produced by the Institute of Physics) to keep us informed on the latest research on teaching concepts and provide us with new ideas for demonstrations. Physics for the Enquiring Mind by Eric Rogers which offers useful insights in the derivation of physical theories. How to Solve Physics Problems by Michael Conterio which is a helpful guide for students and teachers. The Teaching Physics Guide by Alan Denton to provide us with continual reflection on our physics teaching.</p> |