

A Level Physics

Exam Board: AQA

The A Level Physics course provide an excellent basis for Sixth form students wishing to experience the fundamental processes of the natural world in a little more detail than GCSE level. It provides the ideal basis for those intending to pursue a science related career or university course. Completing the A level is necessary for those intending to undertake physics or engineering at degree level, as well as being a good science A Level for those considering medically related courses at university. The A Level course encourages the kind of thought processes essential to potential careers in engineering and the sciences. It can also provide an excellent education for students who wish to study the subject for further academic stimulation. The course involves a degree of 'learning by doing' and so incorporates interesting and stimulating practical work.

Typical Course Content

In Year 12 pupils will cover the following topics:

- Measurements and their Errors e.g. S.I. units, uncertainty calculations, use of error bars
- Particles and Radiation e.g. Radioactivity, Particle families, Particle interactions
- Waves e.g. Wave superposition, Diffraction patterns, Simple Harmonic Motion
- Mechanics and Materials e.g. Newton's laws and momentum, Young's Modulus
- Electricity e.g. Kirchoff's Laws, Ohm's Law, Series and Parallel circuits

In Year 13 pupils will cover these additional topics, as well as being assessed on their skills in practical work:

- Further Mechanics and Thermal Physics e.g. circular motion, oscillations and ideal gases
- Fields and their Consequences e.g. Magnetic, Electric and Gravitational fields
- Nuclear Physics e.g. Nuclear stability, mass-energy conversion
- Engineering Physics

Assessment

Exams at the end of the Upper Sixth will include questions that encompass the entirety of the two year course. In addition to the exams, candidates will complete 12 practical skill assessments throughout the two years.

