

# The Abbey School

## Sixth Form



## Physics A Level

Physics is a fascinating subject in its own right. It is also regarded as one of the 'facilitating' subjects by universities and employers, as it requires students to be creative, solve problems, work individually and in teams, to think about the world around them and to demonstrate high levels of numeracy. Any student who studies Physics in the Sixth Form will find themselves in demand in the future, as well as having a great advantage in their understanding of their own world and the wider universe.

Enhancement and extension activities are provided for all girls - these include Engineering and STEM days, visits to CERN in Geneva and Rutherford Appleton Labs in Oxfordshire, CREST awards, Physics Masterclasses at Oxford, and the highly competitive Physics Olympiad competition.

## Syllabus Content

Our course (the OCR 'A' syllabus) follows an exciting new model which relates theories and ideas with extensive practical investigations and new technology. Topics studied include Mechanics, Fields, Waves, Thermal Physics, Nuclear Physics and Radioactivity, Medical Imaging, Quantum Physics, Electricity and Cosmology. It is an excellent foundation for studying Physical Sciences or Engineering at university.

## Assessment

A series of examinations are completed at the end of the 2 year course in the final term of Upper VI.

A practical endorsement is completed during the 2-year course, and forms part of the final award, but does not carry a grade or mark.

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### Physics IB

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### Syllabus Content

IB Physics can be taken at Standard or Higher level, and the course covers a wide-ranging yet traditional set of topics including Electricity and Magnetism, Waves, Mechanics, Thermodynamics, Atomic, Nuclear and Particle Physics, Energy Production and Imaging. The Higher level course extends many of the Standard level topics and involves more complex mathematical demands.

### Assessment

This is accomplished via a set of examinations taken in the summer of Upper VI. One of these is a non-calculator paper. An Investigative Assignment (an individual project) is undertaken in the autumn term of Upper VI and this contributes toward the student's final grade. Students also collaborate with students taking the other science subjects in Lower VI – this is the 'Group 4 Project', and this forms a part of the final award.

