

A LEVEL PHYSICS

2025-26



THE
PORTSMOUTH
GRAMMAR
SCHOOL

Course Outline

Physics is about trying to answer big questions, in fact the biggest questions in the universe. Physicists need curiosity, resourcefulness and tenacity. If you look through our syllabus, many topics will seem familiar: radioactivity and nuclear physics, mechanics and materials, thermal physics, electricity, electromagnetic and gravitational fields and waves. In addition, there is a lot of new physics to keep you interested such as Particle Physics, Quantum Physics and Medical Imaging.

A Level External Assessment

We follow the OCR Physics A specification. There will be three papers taken at the end of Year 13. Two are of equal weighting and assess everything learned during the full two-year course. The third paper is slightly shorter and aims to be more synoptic. Practical skills are embedded in the course, through a programme of 12 Required Practicals and a Practical Skills Endorsement alongside the A Level grade. In addition, 15% of exam marks are awarded for practical skills questions.

Entry Requirements

You will normally have taken either GCSE Physics or GCSE Combined Science and have attained at least a Grade 8 or 8-8 respectively. In addition, a Grade 7 or equivalent at Mathematics is a good indication that you have a suitable level of mathematical proficiency.

Skills Required and Developed

As with any Sixth Form course you should be organised and efficient. The skills that you can expect to develop are analytical, mathematical, practical, social, and ethical, all of which are increasingly sought after and will make you an attractive proposition to both universities and employers. Physics trains you to understand and interpret scientific information, to process data and solve problems. It develops your practical skills and encourages imagination and common sense. You learn to analyse, build mental pictures, propose theories and to be critical. This is what we call 'scientific thinking.'

Beyond the Classroom

The Physics department has weekly after-school support sessions for general A Level support. Recent trips have included CERN and A Level Physics Live. There are three weekly clubs: Electronics, Astronomy and Engineering society. Sixth Form pupils help to run these sessions and suggest ideas which present ideal opportunities to develop a strong personal statement for UCAS.

University Courses and Professions that Require the Subject

Many PGS pupils go on to read Engineering or Science at University. Physics is key for most such courses. All university courses from Architecture to Medicine regard an A Level in Physics as a secure qualification on which to base an offer.



More Information

Contact our Head of Physics, Mr. S McLean:

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You can also find more information on the exam board's website: www.ocr.co.uk