



PARK HIGH SCHOOL

Physics

Exam Board: OCR

Course Specification: [H556](#)

Qualification obtained: OCR A Level in Physics A

Lead Teachers: Mr Bury
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Subject Overview:

The course covers exciting recent developments in the field of physics. The Year 1 content deals with traditional topics such as Mechanics, Electricity, Waves and Quantum Physics. Practical skills are developed where students develop skills in recording, analysing and evaluating data.

During the second year, some of these topics are revisited in more depth. Topics such as Thermal Physics, Simple Harmonic Motion, Particle Physics, Medical Physics and Astrophysics are included. Practical skills similar to the first year are developed but they require a more mathematical treatment.

Percentage of Exam: 100%

Progression Routes:

A physics education equips a person to work in many different and interesting places—in industrial and government laboratories, in universities, as astronauts, pilots, engineers and even as physics teachers! In addition, many physicists leave the lab behind and work at newspapers and magazines, in government, and in finance and banking; places where their problem-solving abilities and analytical skills are great assets.

A-Level Physics can lead to university courses in Engineering, Physiotherapy, Meteorology amongst others.

Subject requirements:

- Grade 6 in Physics and a 6 in at least one of the other Separate Sciences or Grade 6-6 in Combined Science
- Grade 4 in English Language
- Grade 4 in English Literature
- Grade 5 in Mathematics

Complementary learning:

- Mathematics

Student Quote:

“Physics was by far my favourite subject. The teachers are outstanding and their love of the subject is reflected in the lessons and makes the class an incredibly enjoyable experience. The work, whilst not easy, is simple to master when partnered with hard work and dedication, not to mention the easy to follow and student friendly textbook. The practicals are all very interesting as it is great to put all of the theoretical knowledge to use.”

Year 12

Topics covered:

A-Level Physics covers exciting recent developments in the field of physics and is split into six modules:

- Module 1 – Development of practical skills in physics
- Module 2 – Foundations of physics
- Module 3 – Forces and Motion
- Module 4 – Electrons, waves and photons

Modules 2, 3 and 4 are covered in Year 12 while Modules 5 and 6 are studied in Year 13. Module 1 is covered during both years through a range of endorsed practical activities which are internally assessed throughout both years.

Year 13

Topics covered:

- Module 1 – Development of practical skills in physics
- Module 5 – Newtonian world and astrophysics
- Module 6 – Particles and medical physics

Assessment

There are three separate exams (Component 1, 2, 3 & 4) that are sat at the end of Year 13. The practical endorsement is assessed during lessons throughout the A-Level course.

Unit Code	Unit Title	Assessment Details	Weighting
Component 01	Modelling physics	Written examination: 100 mark, 2hr 15min	37%
Component 02	Exploring physics	Written examination: 100 mark, 2hr 15min	37%
Component 03	Unified physics	Written examination: 70 mark, 1hr 30min	26%
Component 04	Practical Endorsement	Non-Exam assessment: Practical Endorsement	Reported Separately

Additional information

Course specific equipment:

- Protractor
- Ruler
- Scientific calculator

Essential Reading Material:

A Level Physics A for OCR ISBN-139780198352181.

This book covers the content for both years.

Recommended resources:

<http://www.s-cool.co.uk/alevel/physics.html>

<http://www.schoolphysics.co.uk/age16-19/>

Enrichment:

Students are strongly recommended to attend UCL Science Lectures for Sixth Formers held at the UCL Science Centre. These lectures address a variety of Physics areas such as Space Robots, Cosmic Rays and Nanotechnology. Admission is free and no booking or tickets are required.