



OXFORD  
HIGH SCHOOL  
GDST

# A Level Physics

**Sixth Form study options**



# A Level Physics

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## Welcome to the Physics Department

Physics at OHS is challenging, rewarding and fun. To be a successful physicist, you will need to be resilient, intelligent, a strong mathematician, dexterous in your use of complex equipment, curious and determined. If this sounds like you, read on! The Edexcel A Level Physics course lasts two years, with formal exams at the end of the second year. Physics at OHS is challenging, rewarding and fun.

### First year of A Level:

Mechanics

Waves and the Particle Nature of Light

Electric circuits

Materials

Space

Further Mechanics

Oscillations

Gravitational fields

### Second year of A Level:

Electric and magnetic fields

Nuclear and Particle physics

Thermodynamics

Nuclear radiation

## Practicals

Physics, like all sciences, is a practical subject. In the Edexcel A level course, there are 16 core practicals which you must do (although we do lots more) in order to gain full experience of the techniques and equipment expected of an A Level student. Successful completion of these experiments will lead to the award of the Practical Endorsement, which is a separate award to your Physics A Level. Throughout the course you will carry out practical activities including:

- investigating interference and diffraction of laser light
- measuring acceleration due to gravity
- investigating systems that oscillate
- investigating the links between temperature, volume and pressure
- safe use of ionising radiation
- investigating magnetic fields.

## Exams

There is no coursework in the Edexcel A Level. However, your performance during practicals will be assessed as described above. There are three exams at the end of the two years for A Level. Papers 1 and 2 are 1 hour 45 minutes long and assess the course content split by topics. Paper 3 is 2 hours 30 minutes long and contains synoptic questions, linking together topics and also asks questions related to the skills and techniques learned by doing the Core Practical. A Level Physics builds on the work done in GCSE Science and Maths, so you should have very good GCSE results from both. Written communication is also important, so you will need to be able to express your ideas clearly and concisely using technical language.



Education is not the learning of facts, but the training of the mind to think.

**Albert Einstein**



## A Level Physics results at OHS

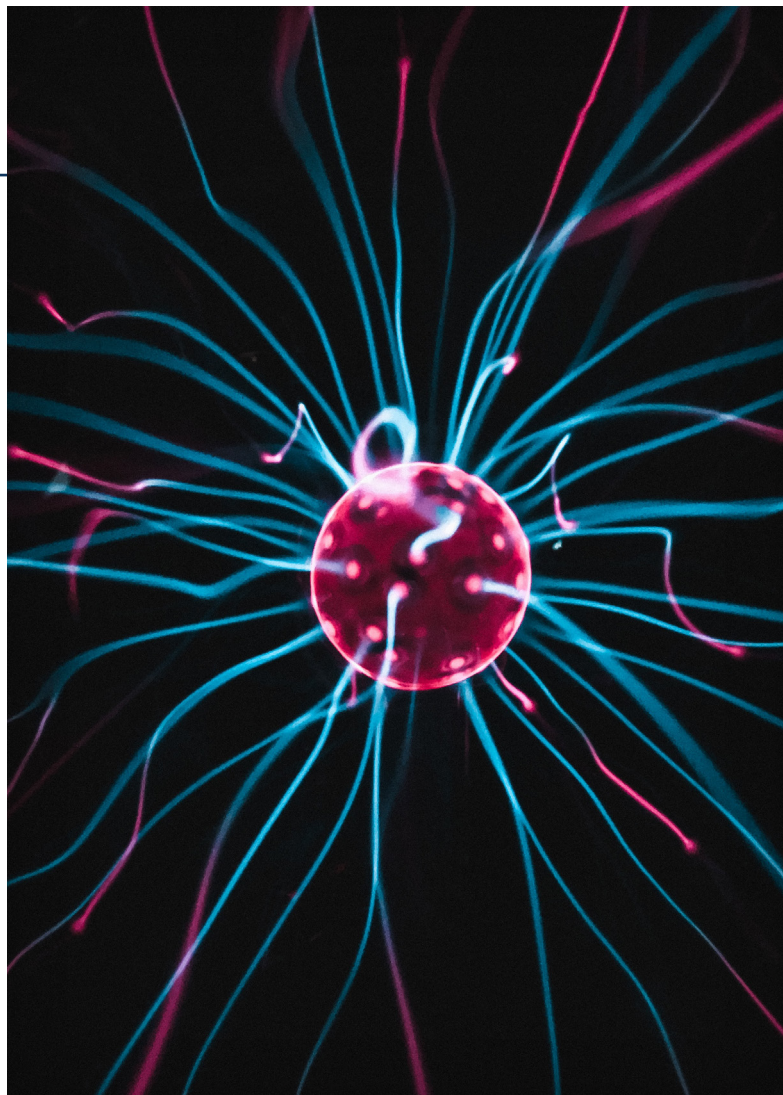
The school has enjoyed a national reputation throughout its long history. Academic standards and results are exceptional, with our students achieving high grades and earning places at top universities.

## What other subjects work well with Physics?

This is what makes the Sixth Form so exciting. Physics goes well with a range of subjects. Many students study it alongside Mathematics, Chemistry, Biology and Philosophy (an excellent combination) as well as Economics, Music, Latin, German, Computer Science and English. In other words, it complements virtually every subject offered at Oxford High. Although the course is designed to be done without the need to choose any other specific Level subjects, we do recommend that Physics is taken alongside Mathematics. If you plan to take Physics further, maths skills are essential and become more and more important as you progress. Do speak to a member of the Physics Department if you would like more advice.

## Where do Physicists go to university?

Students choose a range of top universities to study Physics and very often Engineering, in a range of disciplines. Medicine and Natural Sciences are popular choices. Typical destinations include Cambridge, Oxford, Imperial College and Durham, but physics and engineering based courses are offered at almost every university and college.



Anyone who claims to understand Quantum Mechanics is either lying or crazy.

**Richard Feynman**

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