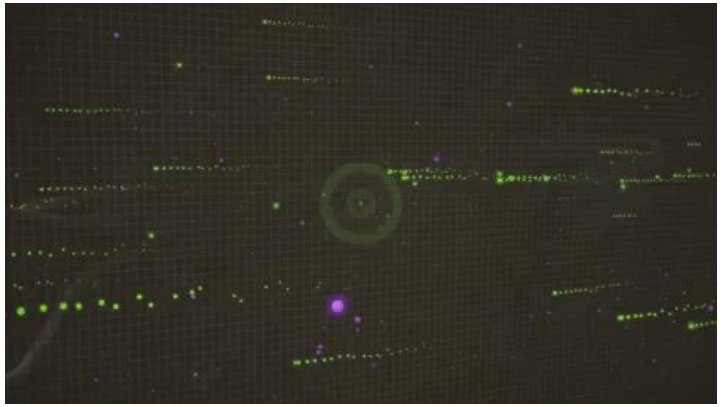
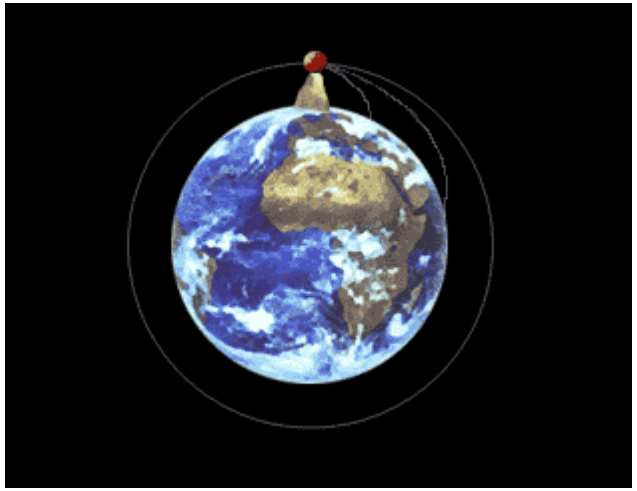
Sixth Form Options

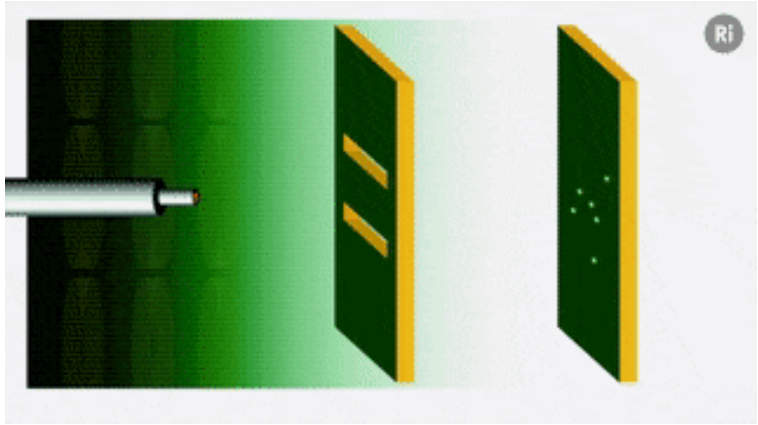
A Level

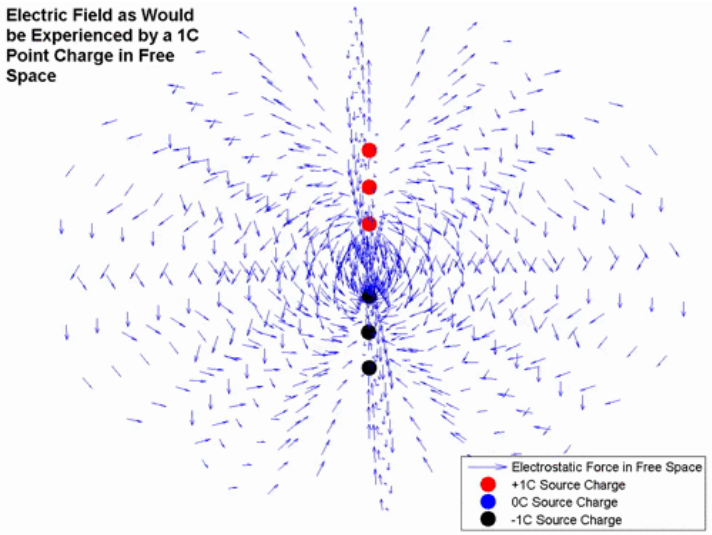
Physics

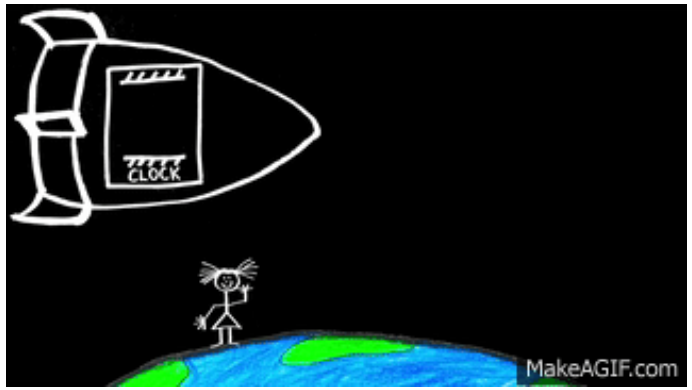
Why choose physics?











Why study physics?

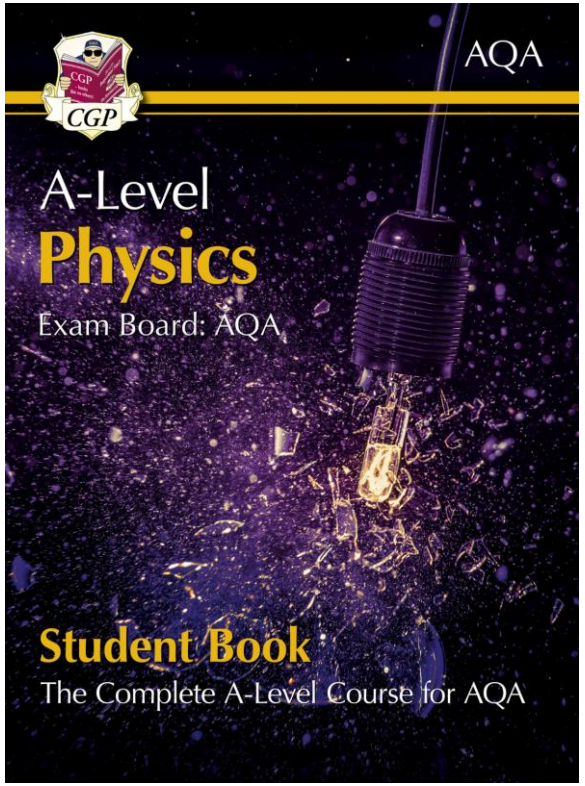
- Develop a thorough understanding of the physical universe

- Cornerstone subject for physics, materials and all engineering courses at University

- Highly regarded in many other disciplines such as medicine, law and economics because you develop great thinking and problem solving skills

- Lots of crossover with Maths, further maths, chemistry and computer science
- Physics students are highly sought after for all kinds of professions and end up getting significantly higher pay on average then their peers!

Course Overview



- **AQA A- Level Physics content:**

  - Section 1: Measurement and their errors
  - Section 2: Particles and radiation
  - Section 3: Waves
  - Section 4: Mechanics and materials
  - Section 5: Electricity
  - Section 6: Further mechanics and thermal physics
  - Section 7: Fields and their consequences
  - Section 8: Nuclear physics
  - Section 9: Turning points in physics

Assessment

Assessments

Paper 1	Paper 2	Paper 3
What's assessed Sections 1–5 and 6.1 (Periodic motion)	**What's assessed** Sections 6.2 (Thermal Physics), 7 and 8 Assumed knowledge from sections 1 to 6.1	**What's assessed** Section A: Compulsory section: Practical skills and data analysis Section B: Students enter for **one** of sections 9, 10, 11, 12 or 13
Assessed • written exam: 2 hours • 85 marks • 34% of A-level	**Assessed** • written exam: 2 hours • 85 marks • 34% of A-level	**Assessed** • written exam: 2 hours • 80 marks • 32% of A-level
Questions 60 marks of short and long answer questions and 25 multiple choice questions on content.	**Questions** 60 marks of short and long answer questions and 25 multiple choice questions on content.	**Questions** 45 marks of short and long answer questions on practical experiments and data analysis. 35 marks of short and long answer questions on optional topic.

Practical skills are taught throughout the course around the 12 required practicals, and are assessed as a single pass/fail independently of the exams.

Additionally, At least 15% of the exam questions will assess practical work.

Importantly, 40% of the exam questions will assess mathematical skills.

Fluency in Maths is crucial in physics!

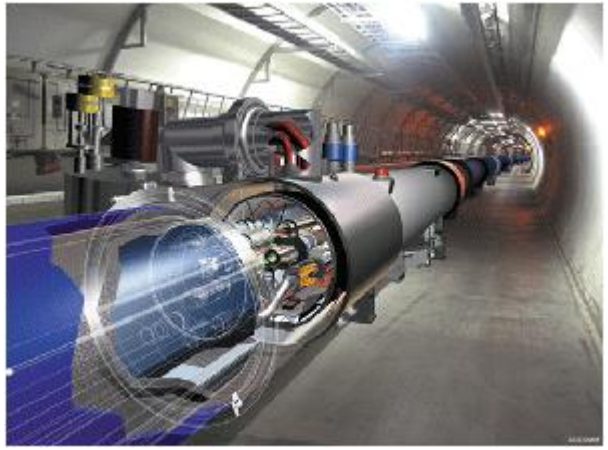
Trips!

Year 12 trip to Cambridge University engineering department

UNIVERSITY OF CAMBRIDGE
Department of Engineering

Year 12 careers trip to the national space centre

Year 13 Trip to CERN in Geneva!



What do students say?

I recommend it if you want to learn how the world works

Makes maths seems more useful

A lot of problem solving which is always fun!

Looks good for Uni!

Rewarding!

Very important for most engineering courses

It answers a lot of questions you may have asked yourself

RPS student destinations in last few years

Engineering: General, aerospace, chemical, electronic…

Oxford, Cambridge, Imperial, Durham, Bristol….

- Apprenticeships in engineering
- robotics
- motor sports engineering
- PPE!
- Music!
- Pilot school!
- Accountancy and finance
- Architecture

Maths and computer science, cyber security …

Oxford, Warwick, Nottingham …

Physics, astrophysics …

Durham, Warwick, Leicester …

What do we need from you?

- Enthusiasm for physics and the natural world!
- Determination to work hard and persevere when the going is tough
- independent study skills
- fluency in maths essential

Minimum Grade 7 in Maths

Minimum grade 6 in physics (or 6 6 in combined science)

Minimum grade 5 in English

The study of maths A-level alongside physics is strongly recommended

Physics

For more information please contact Mr Jacquinot at j.jacquinot@roundwoodpark.co.uk