

SCIENCE - PHYSICS

KS5 (AQA AS AND A-LEVEL PHYSICS)

Course Overview

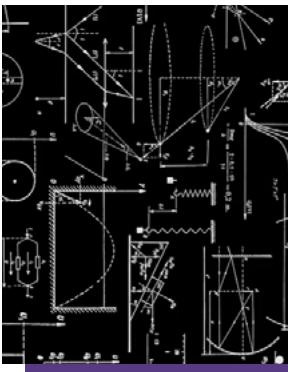
A level Physics is a problem solving subject set in the context of the universe that we live in. It asks questions of the nature of matter at its most fundamental level and links the microscopic properties of particles with the macroscopic properties of systems. It is essential if you are looking to go onto study physics and its related subjects such as astrophysics and engineering and sometimes required if you wish to study medicine. As a facilitating subject, physics is highly regarded no matter what you decide to go onto after year 13.

YR13



Course Content

We follow the AQA specification and the year 13 content includes modules on simple harmonic motion; thermal physics, gravitational fields, magnetic fields, electric fields, capacitors, nuclear physics. The option subject that is studied is turning points as this is built upon the prior learning of the course.



Skill Development

Students will be assessed on their ability to perform skills across the assessment objectives. They are as follows.

AO1: Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures.

AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures:

- in a theoretical context
- in a practical context
- when handling qualitative data
- when handling quantitative data.

AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, including in relation to issues, to:

- make judgements and reach conclusions
- develop and refine practical design and procedures.

Specification link

<https://filestore.aqa.org.uk/resources/physics/specifications/AQA-7407-7408-SP-2015.PDF>

When and how assessment of learning will happen

Assessment happens formatively in class and summatively after every topic as an end of topic assessment. There are 8 end of topic assessments 2 formal mock assessments in year 13. Year 13 ends with 3 external assessments.

The A level practical endorsement is a component to the course that is separate to the grade that students get. It is graded as a yes or no system awarded at the end of year 13 that informs universities about students' practical abilities which feed into their wider study. The assessment is made across 12 required practicals and students need to demonstrate competencies across 5 broad, academically regarded areas of practical science including method writing, constructing risk assessments, analysing patterns in data and researching information with the correct reference.

The final exams/ assessment

3 externally marked assessments at the end of year 13.

Paper 1 examines the year 12 content and the periodic motion topic from year 13.

- 2 hours
- 85 marks
- 34% of the A level

Paper 2 examines the remaining year 13 content.

- 2 hours
- 85 marks
- 34% of the A level

Paper 3 examines practical skills, data analysis and the option topic.

- 2 hours
- 80 marks
- 32% of the A level

Independent Learning Expectations

It is expected that students spend a minimum of one hour on independent learning for every hour of class time. This equates to 9 hours every 2 weeks.

Useful Information

We use a website called Isaac Physics for homework setting, knowledge checking and rigorous challenge.

Revision guides and textbooks are discussed in class so there is no need to buy them before the course starts.

There is an optional session every week after school where students can ask/complete questions and extend their knowledge and understanding. This is essential for students wishing to achieve A*/A grades.