

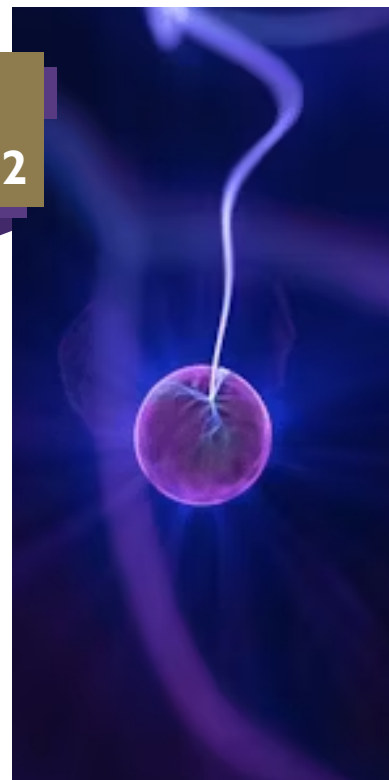
SCIENCE - PHYSICS

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.

YR12



Course Content

We follow the AQA specification and the year 12 content includes modules on measurements and their errors; particles and radiation, electricity, waves, mechanics and materials. The first two weeks are spent upskilling/ reinforcing students GCSE maths in physics and practical skills to be able to move through the course with ease. It is strongly advised that students who are studying A level physics are also studying A level maths.

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 7 end of topic assessments and 1 end of year assessment in year 12 which is done as a formal mock.

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

There is one end of year 12 assessment that is completed as a formal mock exam.

Independent Learning Expectations

It is expected that students spend a minimum of one hour of 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.