

PHYSICS

Technical Information

AQA Certificate in Physics

| Certificate Course Title | Code | Awarding Body |
|--------------------------|------|---------------|
| PHYSICS | | AQA |

| PAPER | Code | Method of Assessment | Weighting |
|-----------|------|--|-----------|
| Physics 1 | | Structured and open questions 90 minute examination | 50% |
| Physics 2 | | Structured and open questions 90 minute examination | 50% |

PHYSICS

Background knowledge and qualifications

Certificate Physics builds upon the knowledge and skills you have acquired during years 7, 8 and 9.

Course description

The AQA Physics course aims to help you become confident in an increasingly technological world. It will help you develop an informed interest in matters of scientific importance through the development of abilities and skills. These skills are not only relevant to the study, practice and application of Physics, but are also useful in everyday life. Physics is taught using real-life examples of physics in action and the emphasis of the course is to demonstrate the relevance of Physics to everyday life.

The Physics separate science consists of the core of the Physics content of Double Award and some additional topics which are **of the same standard as the topics covered in the Double Award.**

A detailed breakdown of the questions answered is listed below.

DOUBLE AWARD PHYSICS TOPICS

- How is heat transferred and what factors affect the rate at which heat is transferred?
- What is meant by the efficient use of energy?
- What are the differences between transverse and longitudinal waves?
- How does the kinetic theory explain the behaviour of solids, liquids and gases?
- What do we know about the origins and the Universe and how it continues to change
- How can we describe the way things move and how can we make things speed up or slow down?
- What is sound and ultrasound and how is it used?
- What happens to the kinetic energy when things speed up or slow down?
- What is momentum?
- What does the current through an electrical circuit depend on?
- What is mains electricity and how can it be used safely?
- Why do we need to know the power of electrical appliances?
- What happens to radioactive substances when they decay and what are nuclear fission and fusion?

FURTHER TOPICS IN PHYSICS TRIPLE COURSE

- How do forces have a turning effect?
- What keeps bodies moving in a circle and what provides the centripetal force for planets and satellites?
- How can electricity make things move?
- How do generators and transformers work?
- How can lenses be used to correct simple eye defects?
- What is the refractive index of a material?

Throughout the course there is a strong emphasis on practical work. This leads to a real sense of achievement and helps understanding of the subject. Practical skills are assessed internally throughout the course as opportunity arises.

Use of Course and Qualification

You can choose to follow an AS course in year 12 if you have gained a grade B or better in the AQA certificate.

Physics leads to a wide range of courses and careers with students regularly going on to study courses in Physics e.g. Astrophysics and various forms of Engineering, Dentistry, Medicine, Veterinary Science, Optometry, and other Science related degrees. Taking Physics complements well the study of other science subjects as similar skills are developed and reinforced. The communication, numeracy and problem solving skills you develop would also stand you in good stead as a preparation for non-scientific courses at university.

