Physics

COURSE OVERVIEW

Physics A level builds on the topics studied at GCSE and looks at some of the big questions like “How did the universe begin?”, “What are the basic building blocks of matter?” and “How does the Sun keep on shining?” Physics also enables students to express their mathematical understanding of concepts such as forces, cosmology and quantum theory.

KNOWLEDGE & SKILLS DEVELOPED

Physics students develop skills in areas such as: problem solving, reasoning, numeracy, ICT and communication. Throughout the course students will also have opportunity to learn, practise and demonstrate a range of practical skills. As well as helping with the understanding and learning of physics concepts these practical opportunities will also help students gain a deeper understanding of the process of scientific enquiry and improve teamwork skills.

In year 12 the following topics are studied:
Working as a Physicist
Mechanics
Electric circuits
Materials
Waves and the particle nature of light
In year 13 the following topics are studied:
Further Mechanics
Electric and magnetic fields
Nuclear and particle physics
Thermodynamics
Space
Gravitational fields
Nuclear radiation
Oscillations

> “I love the problem solving involved in Physics lessons and the opportunity to apply my maths skills”

Qualification: **A-Level**

Awarding Body: **Pearson Edexcel**

ASSESSMENT METHOD

This course is linear and will be assessed through three two-hour exam papers at the end of the second year. Each exam is 2 hours long and provides an opportunity for students to:

- Demonstrate knowledge and understanding
- Apply knowledge
- Analyse, interpret and evaluate scientific information

Paper one covers the theory and application from the first half of year 12 and year 13. Paper two covers the theory and application from the second half of year 12 and year 13. Paper three is a synoptic paper, covering theory and application from all areas, often linking them. It will also assess the practical skills and techniques developed throughout the course.

OPPORTUNITIES AND CAREERS

A Physics background opens up more opportunities than you might think. Physicists have well paid and respected jobs, not just in laboratory work but including:

- Sports science
- Computer game technology
- Music Technology
- Medicine
- Engineering
- Accountancy
- Teaching
- Astronomy
- Media