

# A Level Physics

## Why study Physics?

Physics is the study of the very nature of matter, motion, and the functioning and mechanics of the Universe. It will give you the opportunity to explore and challenge existing ideas and conventions and engage with the really big questions such as •How did the universe begin? and •How does the Sun keep on shining?

## What is the course structure?

Physics A content is split into six modules, which combined with the Practical Endorsement, constitute the full A Level.

The modules can be summarised as:

- € Module 1: Development of practical skills.
- € Module 2: Foundations of physics.
- € Module 3: Forces and motion.
- € Module 4: Electrons, waves, and photons.
- € Module 5: Newtonian world and astrophysics.
- € Module 6: Particles and medical physics.

## Which activities will I be engaged in during the course?

You will enjoy this course if you have a passion for exploring the physical world and universe in which you live. You will develop a deep understanding of the relationships and laws that determine everyday phenomena. You will apply mathematical understanding to investigate and solve problems in a wide variety of situations. You will:

- x Complete experimental and investigative activities, including appropriate risk management, in a range of contexts.
- x Analyse and interpret data to provide evidence, recognising causal relationships.
- x Evaluate methodology, evidence and data, and resolve conflicting evidence.

To achieve the higher grades in this subject you must be prepared to commit to becoming proficient in mathematics in addition to completing independent work.

The learning habits you might be asked to draw upon include:

- x Reading around the subject to gain depth of knowledge and preview new thinking developing in areas of physical science.
- x Evaluating your understanding and identifying any misconceptions within a topic.
- x Thinking and communicating with clarity, using subject specific vocabulary and numerical methods.
- x Questioning, posing problems and investigating new ideas.
- x Developing ways to solve problems by being thoughtful and creative.

## A Level Examined Units... Exam Board OCR

### Paper 1 Modelling physics

Assess content from modules 1, 2, 3 and 5.

100 marks

2 hours 15 minutes written paper

Section A ... Multiple choice (15 marks)

Section B ... Structured questions, covering theory and practical skills (85 marks)

37% of total A level

### Paper 2 Exploring physics

Assess content from modules 1, 2, 4 and 6.

100 marks

2 hours 15 minutes written paper

Section A ... Multiple choice (15 marks)

Section B ... Structured questions, covering theory and practical skills (85 marks)

37% of total A level

### Paper 3 Unified physics

Assess content from all modules (1-6).

70 marks

1 hour 30 minutes written paper

Structured questions and extended response questions covering theory and practical skills

26% of total A level

### Practical endorsement in physics (non exam assessment)

The assessment of practical skills is a compulsory requirement of the course of study for A level qualifications in physics. It will appear on all students' certificates as a separately reported result, alongside the overall grade for the qualification. Student must carry out a minimum of 12 practical activities. Teachers will assess students against the Common Practical Assessment Criteria (CPAC)