

# PHYSICS A LEVEL

Physics is the science of nature in the broadest sense. By learning the fundamental laws that govern our universe, Physics allows us to discover new materials and technologies, from fibre optic cables to quantum computing, whilst discovering where we came from through studying the stars. Our future is based on new discoveries and Physics students are at the forefront of that path.

## WHY STUDY PHYSICS AT A LEVEL?

- To understand how things work and why they are as they are.
- Why is the sky blue? Is the universe evolving? What are the fundamental forces that rule all nature? How do we measure the speed of light?
- To learn to apply your knowledge and understanding of the world around you to a whole variety of situations.
- To develop problem-solving skills and to think in a logical manner.

## WHAT WILL I STUDY?

You will study eight compulsory topics plus one option:

1. Measurements and their errors
2. Particles and Radiation
3. Waves
4. Mechanics and Materials
5. Electricity
6. Further Mechanics and Thermal Physics
7. Fields and their consequences

## 8. Nuclear Physics

9. Option from Astrophysics, Medical Physics, Engineering Physics, turning points in Physics and Electronics.

There will also be opportunities to learn outside the classroom, with visits previously to CERN in Geneva, The Herschel Museum of Astronomy and the Rutherford Laboratory.

## HOW WILL I LEARN?

Each group will have two Physics Teachers and the work will be split between them. There is a mixture of teacher-led lessons, problem-solving, research, IT work and practical work, all designed to further increase the curiosity, knowledge, understanding and study skills of the student. Some of the work will be as a class, whereas the rest will consist of small group or individual work.

Students will also complete 12 required practicals independently in order to achieve the practical endorsement.

## WHERE COULD THIS COURSE TAKE ME?

A Level Physics students often go onto very successful careers, with opportunities in Advanced Apprenticeships, University courses or directly into employment. Employers value the problem-solving and analytical aspects of the Course, as well as candidates ability to work in a disciplined, studious way. It leads to many further education courses, especially in Science, Engineering, Pharmacy and Medicine, and also high paid careers within Industry, Business, the Armed Forces, Finance and Computing.

ENTRY REQUIREMENTS	ASSESSMENT COMPONENTS
Standard Entry Requirements including GCSE Grade 6 or above in Physics or GCSE Grade 6 or above in Combined Science. GCSE Grade 4 or above in English Language and GCSE Grade 6 or above in Maths. It is strongly recommended to study A Level Maths alongside Physics.	<b>Exam Board AQA Code 7408D</b> Three two hour, externally assessed examination papers together with an endorsement of practical skills. <b>Paper 1:</b> Sections 1 – 5 and 6.1. 34% of the A Level <b>Paper 2:</b> Sections 6.2, 7 and 8. 34% of the A Level <b>Paper 3:</b> Practical skills and data analysis and one option. 32% of the A Level