

A Level Physics

What is Physics?

Physics is the best tool we have at our disposal for explaining the universe around us. It tries to describe the laws of nature that have shaped our universe and our world within it. Our understanding of Physics is constantly changing as scientists continue to make new discoveries.

Why study Physics?

Physics is exciting, it is fun, it is challenging, it is rewarding, and it is crucial to understanding the world around us, the world inside us, and the world beyond us.

What makes a successful Physics student?

You will need to be good at problem solving, and be able to use maths to do so. You will need an inquiring mind and be prepared to research beyond the taught lessons. You will have to be good at practical work and be able to collect and process accurate data. You will be ready to find the course and some of the concepts challenging, but not give up. You will need to put in time and effort outside of the taught lessons, learning key facts, practicing questions and reviewing previous work. But maybe most importantly you need to be prepared to ask questions. You'll need to question your teachers, each other and the Universe we can see around us.

To study this course, what qualifications will I need and in which subjects?

You will need at least a grade 6 in GCSE Physics or Science and a Grade 5 in GCSE Maths (preferably from the Higher Tier).

What is the structure of the course?

A Level Modules	A – Level - Assessment by Examination
<p>Core Topics (we study all of these)</p> <ol style="list-style-type: none"> 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 	<p>Paper 1 (34%) Is a 2 hour written exam comprising short, long and multiple choice questions based on the content of topics 1-5 and part of topic 6 (Periodic Motion)</p> <p>Paper 2 (34%) Is a 2 hour written exam comprising short, long and multiple choice questions based on the content of topics 6 (Thermal Physics) and topics 7 - 8</p> <p>Paper 3 (32%) Is a 2 hour written exam split into 2 sections: Section A: Comprising short and long answer questions based on practical experiments and data analysis. Section B: Comprising short and long answer questions based on one optional topic.</p>
<p>Option Topics (we choose one of these to look into in detail)</p> <ol style="list-style-type: none"> 9. Astrophysics 10. Turning points in physics 11. Medical physics 12. Electronics 13. Engineering physics 	

What opportunities are there for me to study beyond the classroom?

Last year with year 12 we visited the International Aviation Academy based at Norwich Airport and saw the opportunities and facilities they have available there. We will be going back again this year as well as visiting other local industries and centres.

What kind of career does this subject/qualification prepare me for?

Physics is a useful subject for the majority of STEM(science, technology, engineering and maths) careers and you'll find physicists everywhere, in industry, transport, government, universities, the armed forces, the secret service, games companies, research labs and more.

Physics is especially helpful for jobs that involve building things and developing new technologies, including: engineering (flight, buildings, space, automotive, civil and loads more), astronomy, robotics, renewable energies, computer science, communications, space exploration, science writing, sports and games technology, research and nanotechnology.