



Physics

Exam Board: AQA

Contact teachers: Dr R Dean, Mr E Van van Hoek

Why study Physics?

Physics involves: creative thought, mathematics, analysis, practical work, linking ideas, communicating, ethics and faith, designing, a sense of humour, interpreting data, problem solving, determination and understanding the universe - but do not worry, we develop these abilities as we progress.

We aim to answer questions such as what is the LHC (Large Hadron Collider)? What is wave/particle duality? Where did the universe come from? And who or what is a 'quark'?

A level Physics is a very well-respected qualification. Throughout the course, students are constantly encouraged to develop their communication, ICT, research and practical skills. Physics is fundamentally an experimental subject and we provide numerous opportunities to use practical experiences to link theory to reality and equip you with the essential practical skills you need. The skills learnt in Physics have application in a very wide range of contexts and would be excellent preparation for any Physics, Engineering, Mathematics or Computer Science degree.

Course details

Year 12	1.	Measurements and errors
	2.	Particles and radiation
	3.	Waves
	4.	Mechanics and materials
	5.	Electricity
Year 13	6.	Further mechanics and thermal physics
	7.	Fields
	8.	Nuclear Physics
Optional topics	9.	Astrophysics
	10.	Medical physics
	11.	Engineering physics
	12.	Turning points in physics
	13.	Electronics

How is the course taught?

The AQA A level Physics specification builds directly on the AQA GCSE Combined Science and Physics specification and we regularly refer back to GCSE subject knowledge to underpin the new material being taught. At A level we develop your skills to tackle problems using more advanced mathematical techniques, and to explore and apply the underlying concepts of Physics in a more sophisticated way.

The course is supported by practical skills and data analysis, the units are taught sequentially with exams in the summer. A series of practical experiments will be completed at appropriate points in the course. We also expect you to broaden your knowledge by reading periodicals such as 'New Scientist' and by following popular scientific accounts in the media.

How is the course assessed?

Paper 1 : A 2-hour written paper, worth 85 marks, assessing Year 12 topics. 60 marks of short and long answer questions and 25 multiple choice questions on content.

Paper 2 : A 2-hour written paper, worth 85 marks, assessing Year 13 topics. 60 marks of short and long answer questions and 25 multiple choice questions on content.

Paper 3 : A 2-hour written paper, worth 80 marks, assessing practical skills, data analysis and the option topic. 45 marks of short and long answer questions on practical experiments and data analysis. 35 marks of short and long answer questions on an optional topic

Entry Requirements

Ideally Grade 7+ in GCSE Physics (Students achieving a Grade 6 will be considered individually).

Ideally Grade 7-7 or better in Combined Science (students achieving a Grade 6-6 will be considered individually).

Grade 6 at least in GCSE Mathematics.

Taking A level Mathematics is recommended for A level Physics.

Career routes and popular combinations

Students study Physics A level as a pathway to university courses in Physics and other subjects where Physics is a key component such as engineering. However, Physics A level is highly regarded in many other areas such as Banking, Law and Business because of the training in analytical problem solving.