

Physics

at MSJ Sixth Form



Physics teaches us a method of systematic thinking and the theories necessary to allow us to understand how the things we rely on actually work. After all, without Physics there would be no light bulbs, mobile phones, cars, planes, solar panels, high speed fibre optic broadband, computer games, radiotherapy, CT and MRI scanners, TVs...

Get the picture? With Physics you could help develop the next breakthrough in medical techniques, design the highest building in the world, or solve the world's energy problems. Physics is highly regarded by universities as a test of problem-solving ability and logical thought and as such, is a very good facilitating subject.

TO PURSUE THE A LEVEL COURSE SUCCESSFULLY, PUPILS IDEALLY NEED A MINIMUM OF:

GCSE Physics Grade 7 or equivalent and Grade 7 in Mathematics

We strongly recommend that A Level students have studied Triple Science or its equivalent. If you wish to study one or more of the sciences at A Level and have taken the Double Science GCSE please discuss this with the relevant Head of Subject.

WHAT DOES THE COURSE INVOLVE?

The course develops familiar subject matter studied at GCSE level, such as Waves and Electricity, but also focuses on new and exciting topics, including Particle Physics. The Option topic permits a further area of Physics to be studied in greater depth. A variety of teaching styles and techniques are employed to bring the subject alive, and to emphasise the relevance of Physics in today's technological society, a variety of contexts and applications are presented.

Practical skills are developed by carrying out experimental and investigative activities, some of which require the use of IT to capture and process data.

Not only do these activities help prepare you for Paper 3, but practical skills are also valued highly by universities if applying for Science courses.

IS IT THE RIGHT COURSE FOR ME?

What skills will I need?

Perhaps the greatest skill a physics student needs to develop is a sense of wonder about how things work. Mathematics is undoubtedly an important tool in Physics, as is the ability to communicate effectively using appropriate scientific language.

Physics is a practical subject, so you should enjoy undertaking experimental investigations and be confident in the use of laboratory equipment.

WITH WHICH OTHER SUBJECTS DOES IT WORK BEST?

A Level Physics goes well with Mathematics and other Sciences, as well as Computing, Design & Technology, Economics or Geography.

WHAT ARE THE POSSIBLE CAREER PATHWAYS?

A Level Physics covers essential topics for progression to university courses in Physics and other subjects in which Physics is a key component. It is highly regarded by universities as a test of problem-solving ability and logical thought and as such, is a very good facilitating subject. Careers are wide-ranging and numerous and include: Research and Development, Engineering, Architecture, Medical Physics, Electronics, Communications, Computing, Space Science, Meteorology, the Energy Sector, Defence, Teaching, Law and Finance. Additional information on career possibilities may be found at www.iop.org.

TWITTER

@MSJ_STEM

HEAD OF SUBJECT

Mr P Forsyth
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EXAM BOARD

AQA

HOW IS IT ASSESSED?

Physics is offered as a two year full A Level course. Over the course of the two years you will complete 12 compulsory experiments, where you will be assessed on your practical skills and the ability to carry out practical work in a safe and scientific manner. Physics is a hands-on subject and throughout the two years you will study the following topics:

- Measurements and their errors
- Mechanics and materials
- Fields and their consequences
- Particles and Radiation
- Further Mechanics and thermal Physics
- Nuclear Physics
- Waves
- Electricity
- Option topic

At the end of the two years you will sit three written papers, each two hours long, as described below:

Paper 1:	Sections 1-5 and 6.1 (34% of A Level)
Paper 2:	Sections 6.2, 7 and 8 (34% of A Level)
Paper 3:	Practical skills and data analysis and Section 9 (32% of A Level)