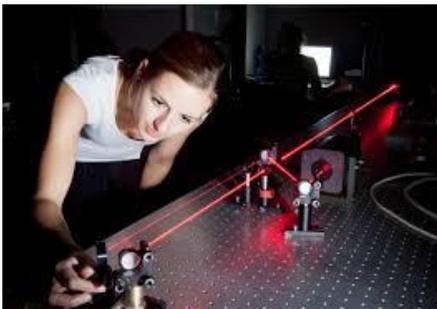


# A Level Physics

Physics is an exciting subject which will help you to understand the world and universe around you! A Level Physics opens the doors to all sorts of courses and careers. All of the technology that surrounds us is based on the principles of physics, so if you are considering working in any area related to technology, from music to



studying physics is an essential first step. It is no surprise that those with a background in physics are in demand by many employers.



## Where will Physics lead you?

Some A level pupils go on to study physics at university. This may lead to a career in research and development.

Perhaps the majority of those who study A-level Physics do so in order to apply their physics knowledge in another subject area at university. Examples of this are electronics, meteorology and the many branches of engineering. For these careers, A-level Physics is essential.



Another group of pupils choose to study physics because they feel that it will be useful even if not essential for their career. Those intending to follow a career in medicine, veterinary science or biochemistry fall into this category.

The remainder are going to follow a career in a completely unrelated area such as law or accountancy. This group of students may have chosen physics simply because they enjoy it or because they know that it is highly regarded by universities as a test of problem-solving ability and logical thought.

*A level Physics is also a 'facilitating subject', considered suitable preparation for a wide range of degree courses precisely because of the way of thinking that it helps to inculcate.*



***Wendy Piatt, the ex-director general of the Russell Group of 20 of the UK's leading universities says:***

*"Subject choices at school or college can be crucial to maximising a young person's life chances,"*

*"Studying physics at school is excellent preparation for a range of challenging and rewarding degree courses and careers both inside and out of the sciences. This is why it is one of the 'facilitating subjects' most frequently cited as essential for entry onto both STEM (Science, Technology, Engineering and Maths) and non-STEM courses at Russell Group universities."*

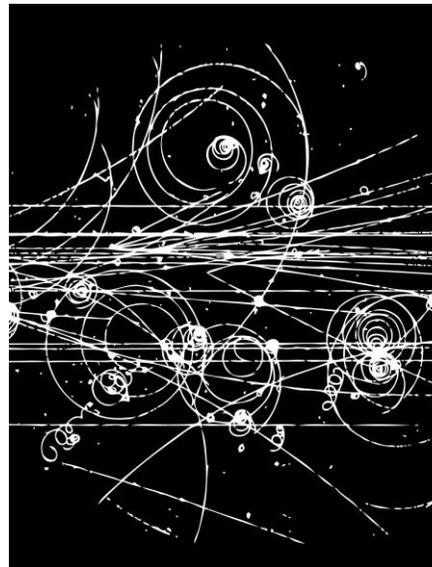
**AQA Physics A** is a traditional concept based syllabus, popular in grammar schools. It provides a smooth pathway from GCSE and a route to university courses in physics and other subjects in which physics is a key component.

Physics at A-level can be a bit mathematical at times, and so it is best to take maths as well, mechanics in particular. Pupils not doing maths still do okay, they just have to work a bit harder. Many students choose to combine physics with one of the other sciences such as chemistry or biology, while others who are thinking of becoming an engineer or architect combine physics with design-technology or art. For university courses in physics or engineering, maths is a requirement.

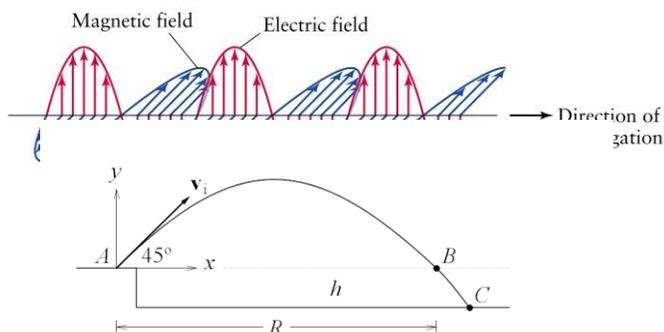
# Year 1 units

## Particles, Quantum Phenomena and Electricity

- Particles and Radiation
- Electromagnetic Radiation and Quantum Phenomena
- Current Electricity



## Mechanics, Materials and Waves



- Newtonian Mechanics
- Materials
- Waves

## Practical skills

Practical skills are learned when studying electricity, materials, waves and mechanics. These skills will be assessed in a written paper.

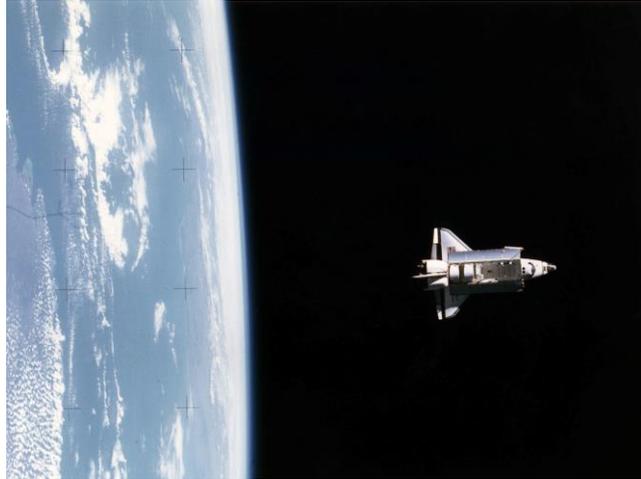
**Note: There are no controlled assessments in A Level Physics!**



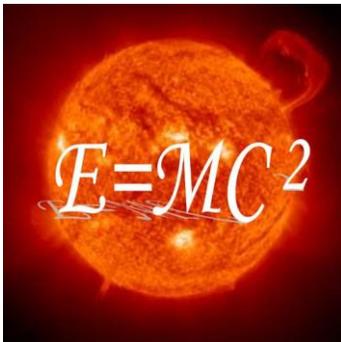
# Year 2 units

## Fields and Further Mechanics

- Further Mechanics
- Gravitation
- Electric Fields
- Capacitance
- Magnetic Fields



## Nuclear and Thermal Physics



- Radioactivity
- Nuclear Energy
- Thermal Physics
- Turning Points in Physics

### Upper Sixth destinations – Summer 2018

University of Southampton	Civil Engineering
University of Manchester	Physics
University of Warwick	Engineering
University of Nottingham	Psychology and Philosophy
Cardiff University	Radiotherapy and Oncology
University of Oxford	Physics
King's College London	International Relations
Nottingham Trent University	Biomedical Engineering
University of Nottingham	Aerospace Engineering
University of Cambridge	Law
University of Nottingham	Physics
University of Nottingham	Aerospace Engineering
Gap Year	
University of Manchester	Biomedical Sciences
Nottingham Trent University	Physics

- <https://www.iop.org/careers-physics/your-future-with-physics>
- <https://www.iop.org/careers-physics/your-future-with-physics/career-paths>
- <https://nationalcareers.service.gov.uk/job-categories/engineering-and-maintenance>