

## Physics at Work

Listed below are just a few careers that students studying A-level Physics have progressed on to..... there are many more!

<b>Archaeologist</b>	<b>Meteorologist</b>
<b>Aeronautical engineer</b>	<b>Medical physicist</b>
<b>Biophysicist</b>	<b>Nuclear scientist</b>
<b>Cyberneticist</b>	<b>Oceanographer</b>
<b>Civil engineer</b>	<b>Optometrist</b>
<b>Dentist</b>	<b>Photographer</b>
<b>Ergonomics expert</b>	<b>Pharmacist</b>
<b>Environmental scientist</b>	<b>Quantity surveyor</b>
<b>Forensic scientist</b>	<b>Recording engineer</b>
<b>Flight engineer</b>	<b>Structural engineer</b>
<b>Geologist</b>	<b>Space scientist</b>
<b>Geophysicist</b>	<b>Teacher</b>
<b>Horticultural scientist</b>	<b>Technical writer</b>
<b>Industrial designer</b>	<b>Veterinary surgeon</b>
<b>Journalist (science)</b>	<b>Water manager</b>
<b>Land surveyor</b>	<b>Yacht and boat designer</b>

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**GREENHEAD COLLEGE  
PHYSICS DEPARTMENT**

### WHY CHOOSE A-LEVEL PHYSICS?

A-level Physics is an important qualification for many careers.

Some students go on to study physics at university. This may lead to a career in research and development, either in a university or in industry. High temperature semiconductors, a better understanding of sub atomic particles and more efficient ways of storing energy for cars are just three areas of research being pursued at the moment.

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 the many branches of engineering, electronics and meteorology. For these careers, A-level Physics is essential.

Another group of students 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 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.



We do hope that for whatever reason students choose to study physics at Greenhead College, they find it exciting, stimulating and challenging.

## Resources

- ✓ The most important feature of any department is its teaching and support staff. The physics students at Greenhead are particularly fortunate to be taught by one of four well-qualified, highly-experienced teachers with proven examination success and to be supported by an excellent full-time laboratory technician.
- ✓ Physics staff are available during every period of the day and at break-times to assist students with the regular homework problems set, or with any other issues which students have.
- ✓ All lessons are taught in well-equipped specialist laboratories, allowing all standard A-level experiments and many more complex tasks to be carried out by students in order to develop their skills and enhance their understanding.
- ✓ Students are issued with a range of textbooks, revision guides and question booklets in order to support their learning outside the lessons. The library also has copies of all current A-level physics textbooks on the market.
- ✓ All students have access to the physics virtual learning environment from any computer within college and also from home. As well as containing useful supplementary notes and handouts, this facility is also able to host forums, interactive quizzes, online tests and links to many useful and interesting websites.

## The Course

The course at Greenhead follows the AQA Physics A specification, which contains material both familiar and completely new to students.

**A1 Year:** All students follow the Advanced Subsidiary (AS) course, taking the examination and gaining the AS qualification at the end of the year. Topics include Particle Physics, Quantum Physics, Electricity, Mechanics, Materials and Waves.

**A2 Year:** Students who so wish continue to study for the Advanced (A-level) qualification. Topics include Fields, Further Mechanics, Nuclear Instability and Thermal Physics.

Students also have the opportunity to do extension activities, such as Engineering Projects, or visits to Universities for Masterclasses on subjects such as Astrophysics.

Further course details can be found on our web site: [www.greenhead.ac.uk](http://www.greenhead.ac.uk)

## Entry requirements

The Physics AS and A-level courses build upon the concepts and knowledge developed during both the GCSE Science and GCSE Additional Science courses. Therefore, it is not suitable for students who have followed an Applied Science GCSE or a single GCSE in Science.

Furthermore, mathematics is an essential tool for the physicist: there is some mathematical work in most lessons. For this reason, students who choose to take the AS or A-level Physics course must also take either AS or A-level Mathematics with Mechanics.

### **Maths is an essential tool for the Physicist!**

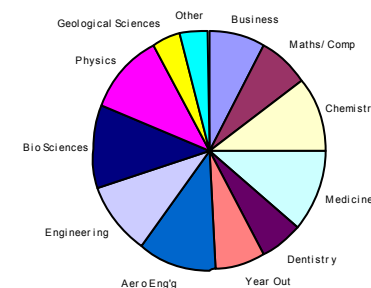


*He's not as intelligent as we thought ... he has real problems with reciprocals ...*

## Examination Results

Examination results are well above the national average. Last year 62% of our A-level Physics students achieved grade A or B. This compares with the national figure of 52%. The department encourages those students who wish to extend their knowledge and understanding beyond A-level with "Further Physics" sessions and entry to the British Physics Olympiad.

### **Destinations of Physics Students**



## Life after Physics at Greenhead

This chart gives a good indication of how studying Physics A-level can lead to a wide variety of interesting and challenging courses at university.