



## PHYSICS

### Course Information

With the introduction of the new A level Specifications in 2015 we have continued to offer the Edexcel A level Physics Course. We have run the Edexcel course very successfully for many years and have the resources and expertise in place to continue to succeed in teaching the new specification.

There have been few major changes to what we have already taught successfully. The main change has been in the way the practical assessment is carried out; rather than being an internally assessed controlled assessment it is now assessed within the written papers and in a series of core experiments. The former will contribute to the final grade awarded and the latter to a separate 'practical competency' pass mark being awarded based on internal assessments.

The content of the course is very similar to what we already teach. This means we have the expertise and resources in place to deliver the content and core practical's successfully, and to create a rigorous internal assessment system; vital for a linear two year course.

The beauty of the Edexcel course is that it can be delivered through a concept or context led approach. We offer a mixture of both teaching approaches. The concept led approach is our starting point where the new skills and ideas are taught specifically as concepts. We then reinforce these with students using the context led books (Salters-Horners) to apply the new skills and concepts learnt in various contexts. This includes using real world examples such as how satellites and CD players work to archaeology, sports and surgical implants. Teaching the ideas and concepts required for A level Physics through these contexts will not only reinforce the skills learned, but also demonstrate the relevance of Physics in everyday life.

### Teaching & Learning

The course is taught by two Physics specialists to ensure the highest standards of teaching possible. A variety of teaching methods will be implemented including experimental work, demonstrations, videos, presentations, discussions and computer simulations. Examples include experiments to model bungee jumping, measuring the properties of chocolate bars and using computer simulations to build circuits, analyse sounds and describe motion. Students will develop and improve their Physics knowledge base, their experiment skills and their ability to problem solve through these varied activities.

### Assessment

All of the A Level exam will be sat at the end of Y13. The exams are outlined below.

The Grade awarded is based on performance in three external exams. Advanced Physics I and Advanced Physics II are each worth 30%. The third paper, General and Practical Principles in Physics, is worth 40%. This is a synoptic paper which can assess any aspect of the course and will include questions testing conceptual and theoretical understanding of experimental methods. In all three papers 40% of the marks will require the application of mathematical skills.

### Entry Requirements

Students who have achieved Grade 6 at GCSE in either Separate Science Physics or Additional Science GCSE are accepted onto the course. A Grade 6 or higher in GCSE mathematics is also required. It is an advantage to have taken separate sciences at GCSE but not essential. It is recommended that A level Maths is also taken as these two courses complement each other with the skills learned in Maths being used in Physics.

### Career Pathway

A level Physics is accepted by all universities, colleges and institutes of Higher Education for numerous courses including Physics, Engineering, Material Sciences, Electronic Engineering, Astrophysics and many medical



courses to name but a few. Degrees in these subjects lead to jobs at the cutting edge of technology in a vast range of fields. A Level Physics is also very highly regarded in itself by employers in many different fields, as it develops students' problem solving, experimental, and mathematical skills.

### **Student Destinations**

Virtually all students who complete A Level Physics continue on to higher education, usually at top universities. Most will chose a course where the skills they learn in Physics is either essential or highly valued in the application process.

Should you like to receive any additional information on this course please contact Mr J Goodchild – Head of Department