Why study Physics?

Physics is the subject that helps us to understand nature from the smallest possible scale (deep inside the atom) to the largest conceivable scale (stretching across the entire Universe). Physics is about making predictions, testing them through observations and measurements, and devising theories and laws to make more predictions. You will cover the key ideas of the subject and you will learn about topics such as mechanics, electricity and waves. You will learn the skills of making observations and measurements, and how to use your mathematical skills to make sense of experiments. You will learn how to communicate effectively your knowledge and understanding of the subject. You will also learn how to think logically about a problem and how to apply what you know to new situations – a useful skill in all areas of life!

What will you be learning?

We follow the OCR A Physics course; there are six teaching modules in total over the new A Level course. In Year 12 you will study two units plus two generic topics (Practical Skills and Foundations of Physics) with an additional two units in Year 13 (although we will start one of these towards the end of Year 12). Your A Level grade is based entirely on your performance in your exams, there is no coursework anymore. Practical skills do form an integral part of your A Level course though; there is lots of practical work throughout the course and you will be asked to keep a record of this in a Lab Book. Over the two years you will be assessed against a number of competencies and you will be given a Pass/Fail for the Practical Endorsement. This will appear on your examination certificate and it's likely universities will expect to see a Pass, but it will not form part of your overall marks or grade in Physics. Exam papers will include questions based on the practical work you have done so it is important to look after your Lab Book and revise the practicals you have done as well as the content you have learnt.

In Year 12 the units are:

Forces and Motion	Motion, Forces and Work & Energy, Materials and Newton's laws of motion and momentum
Electrons, Waves and Photons	Electric Current, Resistance, DC Circuits, Waves and Quantum Physics

In Year 13 the units are:

The Newtonian World & Astrophysics	Gravitational fields, Circular motion, Oscillations, Astrophysics and Thermal Physics
Particles and Medical Physics	Electric and magnetic fields, Capacitors and exponential decay, Nuclear physics and Medical imaging

What are the lessons like?

Lessons will be a mixture of note taking, discussions, answering questions, going through questions and practical work not to mention revision and exam technique!

What can it lead to?

Anything! There are many different degrees in aspects of Physics as well as the study of the subject itself...Astronomy or Cosmology, Electronics, Engineering, Geophysics, Mathematical Physics. Or you could apply what you have learned to the study of Medicine, Computing, Accountancy, Journalism, Business, Design, Law...in fact, just about anything! Physics A Level is highly regarded across a broad spectrum of courses and careers. Check out U-Explore for more ideas!

Want to know more?

Please contact AE.Watson@qes.org.uk or S.Rushton@qes.org.uk to find out more about the course.