

HOLLAND PARK SCHOOL SIXTH FORM | PHYSICS

Examination Board
Edexcel
Topics/ Texts Studied
Year 12: Working scientifically, mechanics, electric circuits, materials, waves and the particle nature of light, further mechanics. Year 13: Electric and magnetic fields, nuclear and particle physics, thermodynamics, space, nuclear radiation, gravitational fields, oscillations
Coursework and Practical Elements
The assessment of practical skills is a compulsory requirement of the course of study for A level qualifications in biology, chemistry and physics. It will appear on all students' certificates as a separately reported result, alongside the overall grade for the qualification. Students will participate in approximately 12 core practicals over the course of study. Each practical will test core competencies and will contribute to passing the practical component on the qualification. The core practicals will also be examined in paper 3.
Recommended Pre-reading
Six easy pieces (Feynman), Six not so easy pieces (Feynman), The character of physical law (Feynman), The elegant universe (Greene), Storm in a teacup - the physics of everyday life (Czerski), Seven brief lessons on physics (Rovelli), How to teach quantum physics to your dog (Orzel), Black hole blues (Levin), Mapping the universe (Natarajan)

Where will this course take me?
Physics is a highly regarded A level. Universities and employers will recognise the level of challenge and problem solving skills required to be successful. Physics A level can enhance your application to a wide range of university courses, including, in addition to physics: engineering, natural sciences, chemistry, biology, biotechnology, maths, computer science, medicine and all other healthcare courses, geology, geography, electronics, as well as a wide range of apprenticeships including software development or sound engineering. Students who study physics have access to a wide range of careers, from working in medicine as a medical physicist to designing new structures as an engineer or architect, or creating films and computer games as programmers. Physics students also may choose to work in the environmental sector (for example by developing new technologies in the renewable energy industry). Physics provides a logical, questioning, scientific approach which is invaluable in setting up businesses or writing for a newspaper. The world that physics can open up for you is quite endless, and others choose to discover the nature of reality by pursuing research physics, considering the possibility of multiple dimensions or how to detect gravitational waves.
Why should you study this course?
During A level physics, you will develop skills that can be transferred to just about any other area of work, from setting up a business to working towards a greener future for our planet. You will begin to think like a physicist, developing your problem solving skills and ability to ask the right questions - namely the questions that underpin the reality of the universe we inhabit. You will also learn how to apply maths to the real world and explore worlds typically beyond the scope of mundane human understanding - namely particle physics and cosmology.
What are the entry requirements?