



# St Paul's Catholic School

## A LEVEL PHYSICS

**Entry requirements:** Generic A-Level entry requirements plus at least a grade 6 in Physics or grades 6/6 in Double Science plus a minimum grade 6 in mathematics

**Exam Board:** AQA

### **Specification Requirements:**

We follow the AQA A Physics (7408) course.

<https://www.aqa.org.uk/subjects/science/as-and-a-level/physics-7407-7408/spec-at-a-glance>

### Year 12

**Working as a Physicist:** students will be trained in planning, carrying out and recording practical investigations and gain insight to the ways in which physicists ensure they take the best measurements possible to be confident of the outcomes of experimental work.

**Waves and the particle behaviour of light:** the basic behaviours of oscillations and waves will be studied so that we understand things like how polaroid sunglasses work and why physicists think of light as having wave properties and behaving like a particle.

**Mechanics:** applying scientific ideas and mathematical skills to solve problems in physics and engineering contexts.

**Materials:** involves understanding the way in which different materials and structure react when they are subject to forces.

**Electric circuits:** students will build on their understanding of electric current, charge and potential difference and extend it to looking at resistivity and superconductors.

### Year 13

#### **Further mechanics**

**Thermodynamics:** the ways in which materials respond when energy is transferred to them. Areas like specific heat capacity and the behaviour of ideal gases are introduced.

**Electric, gravitational and magnetic fields:** includes work on electronic devices like capacitors and a study of the calculations that are required to launch spacecraft and deliver them to other planets.

**Nuclear and particle physics:** covers important areas like the theories behind nuclear power stations and the relationship between  $E$  and  $mc^2$ .

**Astrophysics:** we look at evidence in the radiation from stars and galaxies that tells us about their nature and the how the Universe seems to have formed, according to the Big Bang Theory.

### Assessment at A Level

The whole course is assessed at the end, with three 2hour papers: Assessment of practical work  
There is no coursework. Practical skills are assessed in the written papers. There will be a set of 12



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core-practical activities that students will complete. The students' performance in this will be reported separately, with an endorsement to those who pass.

**For further information, please contact Mrs West or Mr Clarkson**