



Our Science curriculum intent at Swanshurst, is to encourage a healthy curiosity for Science in all of our students. We develop this through broad, exciting, practical hands-on learning experiences that encourage questioning and investigation of the changing world around us.

We aim to inspire enquiring minds, and develop lifelong learners who are critical scientific thinkers. We also aim to challenge misconceptions, and push boundaries to promote opportunities for all young women in STEM wherever we can.

Key Stage 4

AQA GCSE Physics 8463

GCSE Physics covers a wide range of interesting topics relevant to real life, including how ultrasound scans work, why your ears pop in airplanes, and how we're all made of stardust.

It is also fantastic preparation for a wide range of career options including *Engineering, Radiography, Meteorology* (weather-forecasting), *Architecture, Patent Law*, and others.

Paper 1:

Energy, Electricity, Atomic Structure & Particles (1 hour 45 min)

Paper 2:

Forces, Waves, Magnetism & Space (1 hour 45 min)

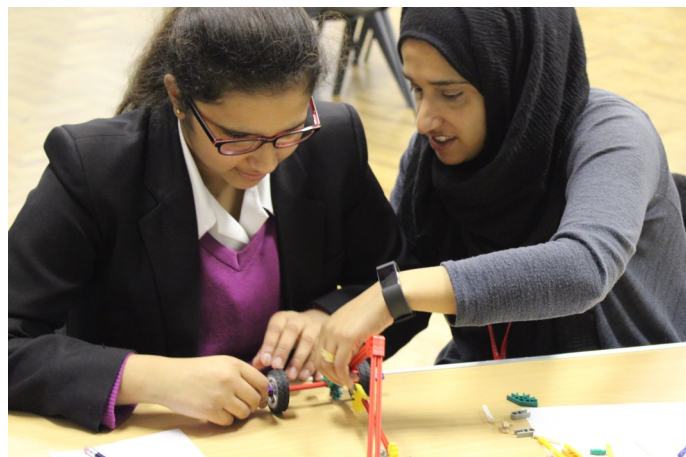
In year 9, pupils study atomic structure, energy and particles. In year 10, pupils study forces, waves and electricity. In year 11, pupils learn about magnetism and space, as well as recapping previous topics.

Key Stage 5

AQA A Level Physics 7408

A Level Physics is fantastic preparation for a wide range of career options including *Engineering, Radiography, Meteorology* (weather-forecasting), *Architecture, Patent Law*, and others.

A Level Physics is an interesting course, covering topics such as how the Northern Lights work, and the Physics of roller-coasters.



At Swanshurst, Physics is taught in small classes and the majority of students are very successful. It is more mathematical than **GCSE Physics**, so students who have enjoyed and been successful in **GCSE Physics** (or *combined science*) and **GCSE Maths** are likely to be well-suited for **A Level Physics**. For the option topic, students are free to choose their preference; this year some students are studying Medical Physics and others are doing Astrophysics.

Paper 1:

Mechanics and Materials, Electricity, Particles & Radiation and Waves (2 hours)

Paper 2:

Fields and their Consequences, Thermal, Nuclear (2 hours)

Paper 3:

Practical skills and data analysis, Option Topic (*Medical, Astrophysics, Engineering, Electronics or Turning Points*) (2 hours)

In year 12, students study the topics for paper 1. In year 13, students study the topics for paper 2 and the option topic.

Practical and data analysis skills are gradually developed throughout the course.