A level Physics

What Course will I follow?

- You will be studying the AQA Physics course.
- Specification code: 7408
- Further information can be found at:
- https://www.aqa.org.uk/subjects/science/as-and-a-level/physics-7407-7408

Year 12 Topics:

- Measurements and their errors (throughout the year)
  - including use of SI units and their prefixes, limitations of physical measurement, estimation of physical quantities
- Particles and Radiation
  - including constituents of the atom, particle interactions, collisions of electrons with atoms
- Waves
  - including progressive waves, interference, diffraction
- Mechanics and Materials
  - including projectile motion, Newton's laws of motion
- Electricity.
  - including current/ voltage characteristics, circuits, electromotive force and internal resistance

Year 13 Topics:

- Further Mechanics and Thermal Physics
  - including periodic motion, thermal energy transfer, molecular kinetic theory model
- Fields and their consequences
  - including Newton's law of gravitation, orbits of planets and satellites, magnetic flux density
- Nuclear Physics
  - including evidence for the nucleus, radioactive decay, nuclear instability
- Option topic which will be decided based on the interests of the class
  - (either Astrophysics, Medical Physics, Engineering Physics, Turning points in Physics or Electronics)

Practical work

- As well as the specified content you will be developing your practical skills and assess using CPAC (Common practical assessment criteria)
- There are 12 required practicals which you will undertake during the two year course, 6 in year 12 and the remaining 6 in year 13
- Practical work is assessed in examination questions in paper 3
- You will also be awarded a separate practical endorsement if you meet all the criteria

How will I be taught?

- Each class will have 2 specialist physics teacher who share the 9 timetabled lessons.
- You will meet a variety of teaching and learning styles throughout the course
- Practical skills also make up a large proportion of the course and new skills will be developed as you progress through the course
- A Level Physics is designed to follow on from GCSE so it is likely that you will recap GCSE ideas at the start of a new topic.
- You will also need to be proactive and read the text book in advance of lessons in order to make the most progress.

How will I be assessed?

- There are 3 exams at the end of year 13 as summarised in the table opposite:
- As well as this you will be awarded the practical endorsement if you meet all the CPAC points

Paper 1	Paper 2	Paper 3
Content • Topics 1 – 5 • and periodic motion	**Content** • Topics 6 – 8	**Content** • Practical skills • Data analysis • Optional topic
Assessment • Written exam: 2 hours • 85 marks • 34% of A-level	**Assessment** • Written exam: 2 hours • 85 marks • 34% of A-level	**Assessment** • Written exam: 2 hours • 80 marks • 32% of A-level
Questions • 60 marks: a mixture of short and long answer questions • 25 marks: multiple choice questions	**Questions** • 60 marks: a mixture of short and long answer questions • 25 marks: multiple choice questions	**Questions** • 45 marks: questions on practical experiments and data analysis • 35 marks: questions on optional topic

Where can I go with this?

Physics and the problem solving skills it develops is useful in many different careers including, but not limited to;

- Aerospace engineer
- Architect
- Geoscientist
- Lighting engineer
- Mechanical engineer
- Medical Physicist
- Nuclear engineer
- Radiographer
- Software developer
- Teacher (primary or secondary)

Related subjects include

- Biology,
- Chemistry,
- Maths & further maths,
- Computing,
- Geography,
- Geology