



The Cardinal Wiseman School **A Level courses 2021-23**

PHYSICS

Entry Requirements:

6 x Level 9 to 4 GCSE passes including a 4 in English Language and a 6 in Maths as well as a 6 in Physics or 6-6 in Combined Science. Students **must** be studying A-Level Mathematics.

What will I study?

- modern techniques of communication
- from fundamental particles to the structure of the Universe
- how forces and motion underpin everyday activities such as transport and sport
- energy demands and the effect this has on the fate of the planet; electrical energy.
- how physics is used to send probes and astronauts into space
- energy and momentum conservation in relation to theme park rides
- searching for new mineral resources and buried remains; imaging organs inside the body.
- how steam and internal combustion engines work
- the structure of matter; high energy particles; electric and magnetic fields
- nuclear materials; spontaneous and stimulated nuclear decay; nuclear fusion; radioactivity.

What are the examination/coursework requirements?

- We will be following the AQA Physics course.
- The A-Level course concludes with three written exams.
- Pupils will complete 12x Core Practicals throughout the year, during which their practical skills will be assessed.

What skills will I develop?

- Making observations and measurements
- Data manipulation
- Analysis and evaluation
- Problem solving
- Teamwork

How will this subject help me with my future career?

The course is essential for anyone intending to follow an Engineering career of any sort, those interested in Health Physics (such as Radiography) or who might be interested in an academic career in Physics or Astronomy. It will be very useful for those interested in Ophthalmology, Medicine, and Architecture. It is also a very well regarded general subject, particularly for financial careers.