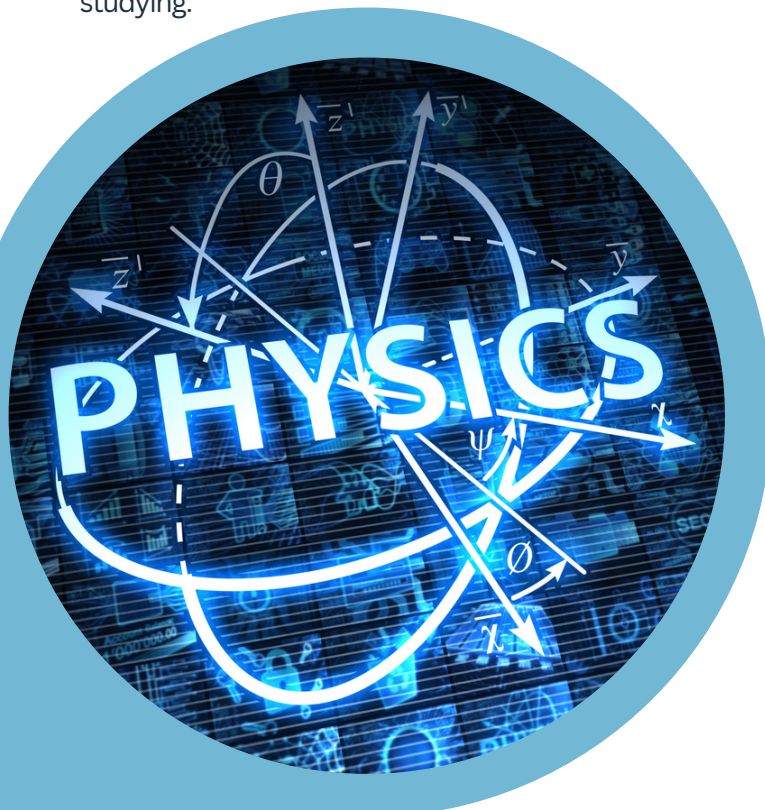


PHYSICS

EXAM BOARD: AQA

Why study Physics?

When you decide to study Physics with us at Stratford Upon Avon School you will be committing to discovering not only the fundamental underpinning reasons for every aspect of how our universe functions but also to developing a method of thinking, questioning and problem solving that will allow you to continue pushing your understanding of the physical world long after you've stopped directly studying.



Have you ever wondered?

- Where lightning comes from?
- Why the standby light on a computer or TV stays on for a few seconds after it's been turned off?
- Why is the sky blue?
- Why is the earth round and not square?
- How can you catch a cricket ball without breaking your fingers?
- How do we know what the sun is made of?
- What is light?
- What has Stephen Hawking been talking about for the past 40 years?
- Why are black holes black?

If you decide to study Physics, after every single lesson you will leave the room knowing and understanding something amazing.

Subject Specification Outline:

- 1 Measurements and their errors
- 2 Particles and radiation
- 3 Waves
- 4 Mechanics and materials
- 5 Electricity
- 6 Further mechanics and thermal physics

7 Fields and their consequences

8 Nuclear physics

9 Option Module either Engineering or Astrophysics

Alongside the subject content students learn the fundamental skills, experimental working methods and modes of thinking required to succeed at A level Physics.

The mix of topics will allow students to cover both the breadth and depth of Physics. From the very large-scale explanations of how a galaxy orbits a supermassive black hole, to the mechanics by which the crumple zones in cars dissipate energy, to the counter intuitive quantum model of subatomic behaviour. Even more exciting than discovering and understanding these discrete areas of physics is identifying the common links and underlying fundamental laws of physics underpinning everything.

If nothing else the structure of the course will allow students to be the people at the dinner party who understand what Brian Cox is talking about and what they talk about on The Big Bang Theory.

Progress Assessment:

- Regular in-lesson micro assessment to ensure that any misconceptions or gaps in knowledge can be dealt with swiftly to allow students to maximise their learning potential
- Semi-regular short assessments per topic (approx. one every 2 to 3 weeks) allow our students regular practice at applying their learning to exam scenarios and receive individual feedback and time to act on this
- Less frequent longer exam style assessments to prepare students for the reality of terminal examinations

Final Exam Format:

Paper 1 – Topic 1-5 & 6.1, 2hrs

Paper 2 – Topic 6.2, 7 and 8, 2hrs

Paper 3 – **Section A** Compulsory section linked to practical skills, topics 1-8, and **Section B** the Option Module, 2hrs.

Self Study Requirements:

An hour of self study for every hour of taught lesson. Self study will include consolidating lesson notes, questions from the textbook, past paper questions and online research. This will include Independent Study work which encourages students to recap over previously learnt work.

Progression Pathways:

There is no hiding from the fact that A-Level Physics is hard, you will have to learn to put aside everyday common-sense notions and accept mind-bending ideas that are completely counter intuitive. Although Physics is one of the hardest A-Levels, it is also one of the most respected by universities and potential employers, it is the critical thinking, accuracy and meticulousness that is respected. To this end an A-Level in Physics would be esteemed and valued in any future pathway but would have particular relevance to studying; medicine, law, finance, engineering, science degrees, research scientists, journalism & broadcasting, energy industry, electrical, lighting & sound engineer, logistics, VFX and Gaming, Robotics and AI and medical physics.