



PHYSICS

Physics makes the world go round, literally!

Physics is the basis of how the world works. Without a basic knowledge of Physics how do you expect to build a house? Wire a plug? Fix a leaky tap? Learn how to drive? Play and study sport? A good grounding in Physics will set you up for any subject that you wish to study or any career that you are thinking of pursuing. Understanding how things work is fundamental to any job and being able to transfer the abstract thinking skills which you will develop in Physics are very desirable in the working world. The ability to think outside of the box as they say!

COURSE DETAILS:

1. Measurements and errors

- Use of SI units and their prefixes
- Limitations of physical measurements
- Estimation of physical quantities

2. Particles and Radiation

- Particles
- Electromagnetic radiation
- Quantum phenomena

3. Waves

- Progressive and stationary waves
- Refraction, diffraction and interference

4. Mechanics and materials

- Forces
- Energy
- Momentum

EXAM BOARD:
AQA (7408)

ASSESSMENT:

A-LEVEL 3 X 2 HOUR EXAMS

- PAPER 1: 85 MARKS – 60 MARKS OF SHORT AND LONG QUESTIONS AND 25 MULTIPLE CHOICE QUESTIONS ON SECTIONS 1-5 AND 6.1 (PERIODIC MOTION)
- PAPER 2 – 85 MARKS – 60 MARKS OF SHORT AND LONG QUESTIONS AND 25 MULTIPLE CHOICE QUESTIONS ON SECTIONS 6.2 (THERMAL PHYSICS) 7 AND 8. (ASSUMED KNOWLEDGE FROM 1- 6.1)
- PAPER 3 – 80 MARKS
- SECTION A: COMPULSORY SECTION: PRACTICAL SKILLS AND DATA ANALYSIS
- SECTION B: STUDENTS ENTERED FOR ONE OF THE OPTIONAL TOPICS 9-13



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5. Electricity

- Current electricity
- Resistivity

6. Further Mechanics and thermal Physics

- Periodic motion
- Thermal physics

7. Fields and their consequences

- Fields
- Gravitational fields
- Electric fields

- Capacitance
- Magnetic fields

8. Nuclear Physics

- Radioactivity

Optional Topics

9. Astrophysics
10. Medical Physics
11. Engineering Physics
12. Turning points in Physics
13. Electronics

WHERE NEXT WITH THIS COURSE?

Physics is a rigorous and well respected qualification which is highly valued by universities it is also a sort after qualification in the UK. With links to many higher education courses such as Mathematics, all areas of Engineering, Medicine, Architecture and Computing to name a few. All the technology that surrounds us is based on the principles of physics, so if you are considering working in any area related to technology from music to medicine, or lasers to law – studying physics is an essential first step. Sixth Form Physics requires a good level of competency with Maths, and we very strongly advise students studying Physics to choose Maths as well.

“The important thing is to not stop questioning. Curiosity has its own reason for existence. One cannot help but be in awe when he contemplates the mysteries of eternity, of life, of the marvellous structure of reality. It is enough if one tries merely to comprehend a little of this mystery each day.”
Albert Einstein

“Somewhere, something incredible is waiting to be known” Carl Sagan



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