PHYSICS (Advanced Subsidiary and Advanced GCE)

Course Title: Advanced Subsidiary / Advanced GCE in Physics
Examination Board: Edexcel

What special qualifications do I need?
It is expected that all students will have a grade B or higher in GCSE Additional Science or GCSE Physics and a grade C or higher in Mathematics.

What will I study and learn?
AS This is studied in the first year and has three units:
Unit 1: Physics on the go (40% AS 20% A2)
- Mechanics and materials in the context of sport, food and surgery.

Unit 2: Physics at Work (40% AS 20% A2)
- Waves and electricity in the context of music, medical physics, space technology and the historical study of the nature of light.

Unit 3: Exploring Physics (20% AS 10% A2)
- Experimental work based on a physics visit or a case study of the application of physics.

A2 The structure of the second year is similar to the AS and acts as a continuation:
Unit 4: Physics on the Move (20% A2)
- Further mechanics, electric and magnetic fields and particle physics in the context of modern rail transport, communications and the detection of high-energy particles.

Unit 5: Physics from Creation to Collapse (20% A2)
- Thermal energy, nuclear decay, astrophysics and cosmology in the context of space technology, medical physics, the structure of building in earthquake zones, stars and the history and future of the universe.

Unit 6: Experimental Physics (10% A2)
- Planning and carrying out an experiment together with analysing results.

How will I learn and will I enjoy it?
Teaching methods include practical work, to develop an understanding of the link between theory and experiment, and to foster the development of skills in the design and execution of experiments. Knowledge and understanding of Physics concepts is placed in context and you will be encouraged to appreciate their significance and the importance of Physics as a human endeavour that interacts with social, philosophical, economic and industrial matters. You will enjoy the course if you have an enquiring mind and are willing to take your own learning seriously.

How will I be assessed?
- At AS Units 1 and 2 each have a 1h 30 min examination.
- At A2 Units 4 and 5 each have a 1h 35 min examination.
- Units 3 and 6 are completed in school and externally moderated.

How will it help me?
GCE Physics is a much respected qualification and allows students to develop many skills that are required in their adult life. It is a requirement for many HE courses eg Physics, Engineering and Sciences. It is desirable in many courses like Medicine, Sports Science and Music Technology; and accepted in most HE courses. The Edexcel GCE in Physics has been designed to encourage students to:
- develop their interest in, and enthusiasm for, the subject, including developing an interest in further study and careers in Physics.
- appreciate how society makes decisions about scientific issues and how the sciences contribute to the success of the economy and society.
- develop and demonstrate a deeper appreciation of the skills, knowledge and understanding of 'How Science Works'.
- develop essential knowledge and understanding of different areas of the subject and how they relate to each other.

Who do I see for more information?
Mrs H Stenson IC 16 – 19 Physics