Advanced PHYSICS

EXAM BOARD: AQA

Provisional Course Entry Requirements

A minimum of two grade 6s or above in GCSE Science, preferably grade 6 or above, a grade 6 in Maths and an average GCSE points score of at least 5.5

AIM OF THE COURSE

The AQA Physics course is one of the most respected Physics course available. It uses contexts and applications to maintain interest and motivate students and highlights for them some of the many career areas that involve Physics. The course is designed to allow a smooth transition from the GCSE Science courses.

YEAR 12 SUMMARY

Unit 1**: This unit involves two contrasting topics in physics:** particle physics and electricity**. Particle physics introduces students to the fundamental properties and nature of matter, radiation and quantum phenomena. In contrast, the study of electricity in this module builds on and develops previous GCSE studies and provides opportunities for practical work and looks into important applications.**

Unit 2**: This unit is about the principles and applications of** mechanics, materials and waves**. It develops knowledge and understanding of forces and energy from GCSE Science. In the second section, materials are studied in terms of their bulk properties and tensile strength. GCSE studies on waves are extended by studying the characteristics, properties and applications of waves, including refraction, diffraction, superposition and Interference.**

YEAR 13 SUMMARY

Unit 3**: This unit advances the study of momentum and introduces circular and oscillatory motion and gravitation. Electric and magnetic fields are covered, together with basic electromagnetic induction, capacitors, and the generation and transmission of electricity.**

Unit 4**: This consists of two sections. The first looks at characteristics of the nucleus and how this can provide energy, and the thermal properties of materials. This is followed by an optional topic, which may change each year.**

Unit 3 and 4 are externally assessed by means of exams in June. There are three exams, paper one consists of Units 1, 2 and 3 and is worth 34%. Paper two consists of Units 1-4 and is worth 34%. Paper 3 consists of Units 1-4 and includes practical skills and data analysis. This paper is worth 32%.

CAREER PROSPECTS

Physics is a respected academic subject whose graduates are much in demand. It is also an essential subject for further study in Engineering, Astronomy and Robotics. Physics is a useful subject for careers in Medicine, Law and Business.