A-LEVEL PHYSICS

We offer A-Level Physics from Edexcel combining the understanding of concepts and applying these concepts in context to find out how things work in the physical world. The girls are taught in a small, friendly group in well-equipped laboratories. The girls have many opportunities for hands on experimental work which links the concepts and contexts and also enhances the scientific understanding of the girls. The girls quickly become confident and independent experimentalists, happy to try out new challenges.

ENTRY REQUIREMENTS

This qualification builds on the knowledge, understanding and practical skills that you gained when studying GCSE Physics. You should have gained at least a Grade B in this subject and you should also have at least a Grade B in GCSE Mathematics, as numerical and mathematical skills are important in Physics. It is important that you can rearrange formulae competently, think logically about problems and communicate effectively

HIGHER EDUCATION AND CAREER OPPORTUNITIES

Physics provides a broad training in skills valued by many employers such as a determination to solve problems, and present explanations clearly. As a Physicist, many specialist opportunities become open to you too.

You could be investigating the realities of climate change and meeting the energy demands of the future. Physics also plays an integral role in the development of new medical technologies such as developing artificial limbs, improving hearing and sight, or designing specialist medical equiptment. In the photo, the students are measuring up Eric having done some stress tests on a Crunchie bar to see if it is up to the job of becoming an artificial leg! There are a multitude of engineering kinds from aeronautical to mechanical or electrical to civil … You could be designing bridges, developing the latest mobile phone or testing planes!

You could be conducting research in organisations all over the world on anything from particle accelerators to analysing the data collected from space or developing functioning systems in a world so small that you can't see it using a normal microscope!

As you can see, there is a wealth of opportunities out there and above are only examples of a few. Studying Physics could take you anywhere from the tiniest particle to the whole universe!

COURSE CONTENT

Both the AS and the A2 courses are divided into three units. In each case, two of the units are examined by written examination papers and the final units are coursework. The outline of the units is shown below.

AS-level

Unit 1: Physics on the go
Mechanics
Materials and fluids

Unit 2: Physics at work
Waves
Electricity
Nature of light

Unit 3: Exploring physics
Students write a report on a physics-based site visit and a related practical

A2-level

Unit 4: Physics on the move
Further mechanics
Electric and magnetic fields
Particle physics

Unit 5: Physics from creation to collapse
Thermal energy
Nuclear decay
Oscillations
Astrophysics and cosmology

Unit 6: Experimental physics
Students complete a written report of an experimental investigation which they have devised and carried out

Full details of the specification and course requirements can be found at the exam board website (www.edexcel.org.uk). For further information about the course at The Maynard School, please contact Mrs Weeks, Head of Physics.