Springwood SIXTH FORM

MATHEMATICS

"The study of Mathematics is like the Nile, begins in minuteness but ends in magnificence."

Carles Caleb Colton

Entry Requirements

A minimum of grade 4 in Maths and English Lang plus at least 3 other GCSEs at grade 5

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Subject Specific Requirements

At least a grade 6 in Mathematics.

About the Course

Before taking the course you will be expected to have achieved at least a grade 6 in your GCSE Mathematics. You will need to complete the Maths Summer Task to a high standard, seeking help with anything that you find difficult. At the beginning of the course, it will be assumed that you can do all of the Maths included in the Summer Task.

Mathematics at A level is a course worth studying in its own right. It is challenging but interesting. It builds on work you will have met at GCSE, but also involves new ideas that some of the greatest minds the millennium has produced. It serves as a very useful support for many other qualifications as well as being a sought-after qualification for the workplace and courses in Higher Education. While studying Mathematics you will be expected to use mathematical skills and knowledge to solve problems and solve increasingly more complicated problems by using mathematical arguments and logic. You will also have to understand and demonstrate what is meant by proof in Mathematics.

An A level in Mathematics is very valuable as a supporting subject to many courses at advanced level and degree level, especially the sciences, geography, psychology, sociology and medical cours-

Assessment

Mathematics at A level will contain elements of pure mathematics as well as some mechanics and statistics

Pure Mathematics : When studying pure mathematics at A level you will be extending your knowledge of such topics as algebra and trigonometry as well as learning some brand new ideas such as calculus. If you enjoyed the challenge of problem solving at GCSE using such mathematical techniques then you should find the prospect of this course very appealing.

Statistics: Studying statistics will allow you to analyse and interpret data. The A-level provides students with a wide range of techniques for understanding and analysing the information around them, which are increasingly important skills in a world of constant change.

Mechanics: When you study mechanics you will learn how to describe mathematically the motion of objects and how they respond to forces acting upon them, from cars in the street to satellites revolving around a planet. Many of the ideas you will meet in the course form an almost essential introduction to such important modern fields of study as cybernetics, robotics, biomechanics and sports science, as well as the more traditional areas of engineering and physics.

Future Applications

Mathematics is a basic requirement for many careers and university courses. Virtually every science, engineering or design course beyond A-Level has a mathematical content. Many of the Arts and Social Science courses such as Accountancy, Business Studies, Economics, Architecture, Geography, Geology, Psychology and Sociology contain elements which Mathematics would be very useful.

Alumni

Hannah (Queens Prize winner studied Maths at Warwick), Darion (Queens Prize winner studied Maths at Cambridge), Marcus (turned down Oxford to work for Rolls-Royce), Jon (Queens Prize winner studied Maths at Oxford), Ben (Studied Maths at Durham) + Many more studying Medicine, Law, Chemical Engineering etc.