Mathematics Curriculum

"Go down deep enough into anything and you will find mathematics." Dean Schlicter

Maths Department

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Overview

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics and a sense of enjoyment and curiosity about the subject.

Students are entered for the UKMT individual and team challenges where appropriate, and also have the opportunity to enter national and regional competitions held at events such as the Big Bang Fair South East.

Key Stage 3

In Year 7, students begin a programme of study tailored specifically to their attainment in Year 6. They are put on a pathway that aims to take their existing knowledge and understanding of mathematics and develop them further into abstract thinkers and independent problem solvers. There is a particular focus on ensuring students are numerate and have a good understanding of how numbers work.

Our KS3 curriculum follows the progression stages as detailed on Kangaroo Maths.
http://www.kangaroomaths.com/kenny2.php?page=Kschemeks3

 "The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on." National Curriculum Extract Autumn 2014.

Key Stage 4

In KS4 students are increasingly encouraged to develop good patterns of study and independent learning. Classroom work focuses on guiding students to reach their full potential in Mathematics.

The (9-1) Mathematics GCSE is a linear qualification examined in the summer of year 11. This offers the students the opportunity to either sit the qualification at a Higher or Foundation level. Final entry tier criteria will be decided in the spring term of year 11.

We enter those students who need extra support for the Edexcel entry level and level 1 qualifications in Number & Measure and Statistics.

For that extra challenge for our more able students we also offer the ability to sit the AQA Further Maths GCSE course.

http://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html

http://www.aqa.org.uk/subjects/mathematics/aqa-certificate/further-mathematics-8360/past-papers-andmark-schemes

http://www.aqa.org.uk/subjects/mathematics/gcse/mathematics-8300

Key Stage 5

In Years 12 and 13 students have the opportunity to study Mathematics AS and A2 level and Further Mathematics AS and A2 level.

In Year 12 students study Core 1, Core 2 and Statistics 1. In Year 13 they study Core 3, Core 4 and Decision 1. Each unit is equally weighted. If students choose to study Further Mathematics they are required to study another 6 modules. This will include Further Pure 1 and 2, Mechanics 1 & 2 and Statistics 2 and 3.

http://www.edexcel.com/quals/gce/gce08/maths/Pages/default.aspx

If students choose to study Further Mathematics to A-level they are required to study another 6 modules. This will include Further Pure 1 and 2, Mechanics 2, and Statistics 1,2 and 3.

http://www.edexcel.com/quals/gce/gce08/maths/Pages/default.aspx

Useful Study links

Every student will have been given a log in for the mymaths website www.mymaths.co.uk
KS4 and KS5 revision books and CDs are available via school at an educational rate.
We have subscriptions with the following sites which have useful links and work sheets to help students with their maths.

http://justmaths.co.uk/online   http://www.mymaths.co.uk   http://ttrockstars.com

We also suggest that students use these links as well to further their understanding:
http://www.examsolutions.net/maths-revision/syllabuses/Edexcel/period-1/specification.php

http://www.physicsandmathstutor.com/maths-revision/

 http://www.hegartymaths.com http://corbettmaths.com http://www.mrbartonmaths.com

Department Website: **http://maths.stwilfrids.com**