

MATHEMATICS



The Mathematics Department at Fulford School is made up of enthusiastic mathematicians, eager to spread both their passion for and understanding of the discipline of mathematics. As a team we are very proud of the level of expertise we possess and in addition to our undergraduate degrees some of our staff hold postgraduate degrees in mathematics and education. Even so, we believe firmly that the study of mathematics is a lifelong commitment and we relish the opportunity to explore new areas within the subject and overcome the difficulties that these may pose to us. We invite all of our students to embrace the same level of resilience and understand that, although it is satisfying to solve a problem, the journey and mistakes made along the way are just as (if not more!) important.

Engaging, interactive and rigorous lessons encourage our students to discuss concepts, experiment with different methods, and compare solutions. We employ a variety of teaching techniques in our lessons to achieve the above such as jigsaws, loop card, and treasure hunts, while ensuring that in every lesson students have the quiet time necessary to answer questions independently as well.

Through a curriculum carefully planned backwards from university level mathematics, as well as continuous guidance and support from all of our staff, we are confident that every student at Fulford School will not only succeed in the subject academically but over time develop an appetite for both its beauty and its challenge.

Key Stage 3

Over recent years we have worked closely with our feeder primary schools to support the transition process through meetings with parents and staff, and running after school enrichment workshops with students.

In Years 7 to 9 students at Fulford School have six one-hour long Mathematics lessons across a fortnight. The scheme of work is based upon the tiered MyMaths curriculum for Key Stage 3. All topics are broken down into units, each of which lasting for approximately two and a half weeks and culminating in an end of unit test. These tests give students an opportunity to demonstrate their gained knowledge and skills, as well as reflect on their errors and address common misconceptions. Students receive homework on a regular basis to help them to prepare for the tests and homework alternates between written work and online forms in order to keep things varied.

Although there are no national exams at the end of Key Stage 3 students at Fulford School are highly recommended to work to their potential during these years as their performance throughout these three years will largely determine the course they take for their GCSE qualification.

Key Stage 4

In Years 10 and 11 students at Fulford School follow the Edexcel course in GCSE Mathematics, at the end of which they will be awarded a single qualification at grades ranging from 9 to 1. Our curriculum has been designed to support students to prepare for the demands of the final examinations, which are widely considered to be far more rigorous than previous specifications under the old A* to G grading system. We believe that student engagement with routine assessments and homework throughout the two years will be crucial to their success and as a department we have spent much of our time creating appropriate versions of these.

Students are placed into sets at the end of Year 9 and in almost all cases will remain in these sets throughout their GCSE years. These sets will be taught either a higher, intermediate, or foundation scheme of work. The reason for the intermediate scheme is to ensure that we do not limit certain students to a foundation or a higher paper so far away from the exams.

The department has ensured that plenty of support material is available to students online. Thus, we pride ourselves on being available to students at all times. We offer weekly after school workshops throughout the year, group support, one-to-one peer tutoring through the Numeracy Leaders scheme, focused form time intervention with the curriculum leader, and more.

Key Stage 5

Mathematics at Key Stage 5 is one of the most popular A Level subjects nationally and we have a similarly large uptake at Fulford School. Students follow the Edexcel specification, which has recently been reformed along with the GCSE. Students will have two teachers, each of whom will teach them half of the Pure aspects of the course and then their own specialisation, either Statistics or Mechanics. Students at this age are expected to reflect upon their strengths and areas for improvement and should address these independently, although teachers will continue to set purposeful, targeted homework. Students study approximately 20 units per year and will sit an end of unit test for each to track their progress. Detailed feedback will be offered to all students on a regular basis and it is expected that this feedback is not only heard but acted upon.

For students considering a mathematical scientific subject at university, it is strongly recommended that they also study Further Mathematics. This is an additional full A Level, covering many more areas of both pure and applied mathematics. For some universities it is essential, while nearly all universities prefer or recommend it. Indeed, many universities make no secret that lower offers may be given to students with Further Mathematics alongside Mathematics on their application. The specification we follow for the Further Maths A Level is the OCR MEI course, which is designed to make the transition from A Level to university study smoother, while retaining the famous challenge offered by a Further Maths qualification.

Many of our sixth formers volunteer to support lessons across other key stages as part of their enrichment activities and even have the opportunity to mentor students through their GCSE years, providing the department with an appreciated and valuable extra resource. Not only does this consolidate their own understanding of mathematics, it also provides them with invaluable experience for their future and looks impressive on a UCAS application.

Extra-Curricular

The department has a range of extracurricular activities on offer. Every year a large number of students across all years are given the opportunity to take part in the UKMT Maths Challenges and we also take part in the Team Challenge events. In six out of the last nine years our Junior Team has succeeded in reaching the National Finals of this event in London, which has given them the chance to compete against the best mathematicians in the country. In 2017 our Senior Team also qualified for the National Finals, representing the local region in London. We are incredibly proud of those students who put themselves out there in this regard and as well as being fun these Maths Challenges undoubtedly have a hugely positive impact on students' achievements at both GCSE and A Level.

Over the last few years the department has involved students in a variety of fundraising activities. These have included mathematical treasure hunts in support of the NSPCC Number Day and Sponsored Sums for Comic Relief, which have in total raised over £20,000 over the last six years. We aim to continue these fundraising activities in the future and use the incredible talent of our mathematicians to help others in need.

Maths Department

Mr M Holland	Curriculum Leader
Miss H Hughes	KS4 Coordinator
Ms P Kelly	KS3 Coordinator
Mr R Harris	Deputy Headteacher
Mr A Rosie	Deputy Headteacher
Mr P Gatenby	Head of Year 8
Mr C Clark	Teacher
Miss H Johnson	Teacher
Mr A Kel	Teacher
Ms E Reich	Teacher
Ms S Sexton	Teacher
Miss M Shelley	Teacher
Miss A Sinclair	Teacher