

## MATHS AT STANBOROUGH

The aim of the Maths Faculty at Stanborough is to continually strive to make the teaching and learning of mathematics accessible and enjoyable to all students, whilst keeping in mind individual targets and provision of effective support and mentoring to meet these.

Providing information with regards to how different areas of mathematics are connected and where the various mathematical concepts are seen and applied in real life is an integral part of our lesson planning.

We will also consistently encourage our students to take pride not only in their achievements, but also in their behaviour. Along with supporting students in fulfilling their potential in the classroom, we also have provision for students to appreciate the beauty of maths and ignite students' passion to extend their learning outside the classroom through a variety of means, from maths challenges to webinars and lectures in Cambridge and London.

What is equally significant to our ethos is to equip students with the necessary skills to achieve the best possible result in GCSE and to facilitate further study in mathematics or related disciplines.

## CURRICULUM KS3

Our KS3 curriculum, which spreads across year 7 and year 8 aims to provide continuity and progression in the topics from KS2 to year 7 and from year 7 to year 8. Students learn maths in ability based sets in KS3. Content delivered in top sets will be more challenging and the pace of teaching and learning will be faster as compared to the content delivered to lower sets. Since there is similarity in topics learnt across all sets, there will be greater flexibility in terms of moving students across sets. Set changes generally take place after 'key assessments', which take place once per term.

The KS3 curriculum incorporates emphasis on strengthening reasoning and problem solving questions. Students will also get opportunities to revisit basic Numeracy, perform tasks related to recalling key rules and developing strategies needed to solve variety of problems efficiently. Students will be taught topics in a way that ensures practice and consolidation. As compared to KS2, students will spend more time working through exercises independently.

Students will be able to access the textbook used in class from home and will also be given guidance with regards to effective use of online resources for reinforcement and revision of topics learnt in class. Homework is set once a week, details of which will be found on ClassCharts. In order to carry out focussed revision and practise weaker topics after key assessments, teachers will provide students with a report highlighting students' strengths and weak areas.

Whilst delivering the KS3 curriculum, one of the underlying objectives, alongside planning lessons to solidify learning will be to ensure that our students are 'GCSE ready'.

## CURRICULUM KS4

KS4 maths curriculum starts in year 9 at Stanborough and this is when the GCSE course is introduced. In year 9, students will explore and extend teaching and learning of topics covered in KS3 as well as bridge any gaps from KS3. Learning in year 10 will build up from material covered in year 9, and in year 11 the focus will be on the 'top end' topics. While studying the GCSE curriculum, students will get lots of experience in solving exam style and past exam questions. Teachers will ensure that students receive ample practice in solving problems related to all the assessment objectives. Although students will begin KS4 in a Foundation or a Higher GCSE class, it will still be possible to move into a different tiered class later in year 9 or in year 10 on the basis of confidence and performance in the three summative assessments.

In year 11, students will write two mock exams, one in November and one in March. Results from these mock exams will be used to create a personalised revision plan for each class and for each student. Students will also be provided with past exam papers on a weekly basis to complete for homework. Examiner's reports from the exam board which are produced after GCSEs will also be used by teachers to update Schemes of Work. This practice, which also addresses common errors and misconceptions, will support students in improving understanding of specific areas of the GCSE curriculum. In this final year of secondary school, period 6 will be put into place to revisit work on key topics.

Students will also be encouraged to use websites supporting personalised and independent learning. Homework will once again be set once a week, details of which will be found on ClassCharts.

## CURRICULUM KS5

At Stanborough, we don't ask *whether* you are going to study maths at sixth form, but rather "What maths are you going to study?" We have a range of options available to suit all attainment levels, interests and future plans.

For those who have achieved at least a standard pass (grade 4) at mathematics GCSE, we offer Core Maths as an enrichment option that can help students to apply the skills they have learned at GCSE to practical contexts in real-life and in their other subjects. In particular, Core Maths supports the study of science, geography, business studies, psychology and economics.

For those achieving at least a grade 7 in their mathematics GCSE, A level mathematics is a popular subject choice. Nationwide, this is the most popular A level and Stanborough achieves very good results. A Level Maths builds from GCSE level maths and introduces calculus and its applications, mechanics and advanced statistics. Studying maths at A level prepares students for further study and employment in a wide range of disciplines involving the use of maths.

For those who enjoy maths and want an extra challenge, we offer Further Mathematics at AS and A level. This is an excellent choice for those wishing to pursue a university degree or career in science, technology, engineering or finance. As well as learning new areas of pure maths students will study further applications of maths in mechanics and decision maths. AS and A Level Further Maths build on, and so are studied alongside, A Level Maths.

Stanborough's sixth form is very highly regarded across all subjects, and is especially noted for its mathematics provision.

## RESOURCES AND FACILITIES

At Stanborough, maths teachers will plan lessons using a variety of online resources as well as textbooks. These will be carefully chosen on the basis of the topic and class and learning styles.

Some maths lessons will take place in a computer suite to provide an opportunity to students to carry out personalised learning and to explore and research mathematical concepts. Online resources used by students will also offer instant feedback which will support in promoting independent learning.

Maths Clubs, which operate across all key stages, provide students with completing a piece of homework or with consolidating work done in class or with extending their learning.

## EXTRA CURRICULAR ACTIVITIES

Students who show an interest in an aptitude for maths are entered in the United Kingdom Mathematics Trust Maths Challenges at the appropriate level each year. Top performers are awarded Bronze, Silver and Gold certificates and the highest scorers qualify for additional follow-on rounds. A number of students in each year group are selected to represent the school in further team maths competitions.

Trips are a regular occurrence in maths for students in all key stages. In addition to team competitions, students attend Maths Inspiration shows and other popular lectures. A weekly maths enrichment club for students of all ages includes extended projects and mathematical games as well as problems and puzzles.

STANBOROUGH SCHOOL

Curriculum Leaflet 2020

## Mathematics