KS3 | CURRICULUM

Mathematics

THE THOMAS AVELING SCHOOL

Mathematics is the most widely used subject in the world. Every career uses some aspect of Maths. Maths helps the mind to reason and organise complicated situations or problems into clear, simple, and logical steps.

Mathematics is a core subject. Our aim is to ensure that we foster an understanding and appreciation of Maths so students can use their skills in their everyday lives, as well as essential exam success leading to development of desirable employability skills. Knowledge of mathematical procedures, an ability to apply logic to solve problems and a patient, analytical approach are all skills developed through the study of mathematics; these same skills are held in high regard by prospective future employers and education establishments.

Problem solving and critical thinking strategies are embedded into our Mathematics curriculum to develop students' ability to think independently and provide opportunities for them to investigate mathematical relationships. We endeavour to help our students develop a positive attitude to mathematics and to develop their understanding in a way that promotes confidence and enjoyment.

Mathematics at Thomas Aveling is taught by highly qualified, mathematics teachers who adapt their teaching to the varying abilities of their students. Students are taught in streamed ability sets based on KS2 attainment, a baseline test and progress made throughout the year. Every classroom in the maths department has an interactive whiteboard allowing for a more interactive and engaging approach to teaching mathematics.

Each year, a selected number of Year 8 students take part in the Junior Mathematics Challenge where they are faced with unusual mathematical problems, whilst Year 10 students take the Intermediate Mathematics Challenge.

As part of our curriculum for all years we aim to develop students' cultural capital. We do this by building our students' confidence in the application of maths in a range of real-life contexts. Students become more able to eloquently reason their own thinking or the thinking of others, they also see the relationships between maths and the sciences or arts and in doing so increase their understanding of the world and begin to see the beauty and power of mathematics.

Our online homework system is found at www.completemaths.com. Students will be able to get their login from their teachers. In addition to finding set homework quizzes on the website, students will also have a personal times tables practice section to develop their numeracy skills.

In Year 7, students are set in ability groups according to their attainment at Key Stage 2, and a baseline assessment undertaken early in the school year to assess readiness for our "Big Idea Curriculum". Regular assessment and homework are a vital part of their learning and setting arrangements are reviewed on a termly basis. The aim of our curriculum in Key Stage 3 is to build on prior knowledge attained at Key Stage 2 and develop fluency, reasoning and problem-solving skills over a coherent journey designed to build on prior knowledge.

Our approach is considered a "mastery" approach to mathematics. Our staff are trained in partnership with Kent and Medway Maths Hubs. This approach means students are given as much time as required to master a topic before moving on to the next. The intent is that students are always equipped with the pre-requisite skills for more advanced topics later. To ensure students are showing readiness to progress, we have a high expectation for scores on topics tests. If students do not meet the expected grade, they are given adequate opportunities to re-test and receive remediation teaching if required. Students who have achieved this required mark will continue to enrich their knowledge of the topics with carefully selected increasingly sophisticated problems.

By the end of our "Big Idea" Journey our Key Stage 3 students will have had an enriched and high-quality KS3 experience of mathematics equipping them with the necessary skills to start GCSE study in Year 10.