

Mathematics

If you stop and think for a few minutes, it becomes inescapably clear that mathematics is pretty much inseparable from life as we know it. It is our job as teachers, who already have an appreciation of the beauty and power of mathematics, to inspire a sense of enjoyment and curiosity about the subject in our students. We would like them to make rich connections across mathematical ideas to develop fluency, mathematical reasoning, and competence in solving increasingly sophisticated problems essential to everyday life. Those problems critical to science, technology, engineering and above all, necessary for financial literacy and all forms of employment.

Throughout the Mastery KS3 curriculum in Maths, the emphasis is on embedding a deep understanding of key concepts, and with the use of manipulatives, to inspire a sense of enjoyment and curiosity about the subject. The intention of this spiralled curriculum is to lay the foundations of knowledge needed for KS4 and helps students to discuss and make connections across topics at various stages, such as starting with sequences (a brand-new topic to students in year 7), which links to a future topic of linear equations.

In Years 9-11 students are assigned to a specific targeted pathway allowing them to focus on achievement and build on previous skills. Lesson starters are designed around retrieval practice before students are given an opportunity to engage in discussions around how previous learning could be linked to a new topic. Highly skilled modelling by staff, who already have an appreciation of the beauty and power of mathematics endeavour to encourage students to apply mathematical thinking to real life contexts. Learning is often revisited during and at the ends of lesson through diagnostic questioning, in which students are given the opportunity to reflect on their learning and critically analyse methods and misconceptions.

With the highest of standards set by teachers and the continued redevelopment of the curriculum, the expectation is that by the end of year 11 all students will be fluent in all aspects of basic numeracy, they will be appreciative of, but not overly reliant on modern technology and they will be financially literate. It is also desirable that students become able to reason mathematically and be competent in solving increasingly sophisticated problems essential to everyday life; those problems critical to science, technology, engineering and above all, necessary for further advancements in education and all forms of employment.