



The Mathematics Curriculum at Nova is Ambitious, Sequenced Carefully, Principled, Inclusive, Research-informed and Enriching.

<p>Throughout mathematics, we always aim to challenge all students regardless of prior attainment. This is done through a highly pitched curriculum, where students are constantly expected to challenge their understanding through applied tasks or synthesised questions. Maths is a subject renowned for complex topics and our curriculum does not shy away from these. Our aim is for every student to be able to proudly declare themselves mathematicians, continuing the subject at A-Level or beyond, or utilising the necessary skills in their day to day careers regardless of where their path leads.</p>	<p>Mathematics can be broken in to 5 main strands, which are introduced in KS3 and built upon in years 10 and 11. These strands are: Number, Geometry, Proportion, Statistics and Algebra. Content within these 5 strands is not discrete, with significant overlap between them. Topics are sequenced in such a way that the fundamentals are picked up early on, and then these are built upon in subsequent lessons and years.</p>	<p>Mathematics is not just a subject taught at schools; it is the fundamental understanding of how the universe works. It is something which every culture has developed their own version of, and our curriculum aims to celebrate the exceptional scholars who pioneered the field around the world. Students do not solely learn one way to do mathematics, they are presented with alternate methods and encouraged to critically analyse and discuss the merits of each. GCSE maths often has one distinct right answer, but many different ways to reach that point.</p>	<p>Our curriculum is based around the central teaching points of Support/Core/Challenge. Support is designed to enable all students to access the main content through scaffolded examples or supplementary practice. For students with significant prior learning gaps, we use the Direct Instruction program to help students develop the necessary skills to access the core curriculum.</p>	<p>In Maths, we utilise well documented research to underpin our teaching and learning. The widely renowned "Rosenshine Principles" form the basis of our teaching style, where new content is introduced by the expert teacher, students have opportunities to expand their understanding through discussion tasks, paired work or shared learning, followed by opportunities for students to independently practice to cement their understanding. We make use of frequent review of learning, using data-driven instruction techniques to help close gaps where they occur.</p>	<p>Mathematics students have the opportunity to join a range of clubs designed to enrich and stretch students' understanding of maths. Examples include Coding Club, where applied mathematics is used to create video games, Mathletes, where students will work together to solve complex problems and £10 Enterprise challenge, where students aim to make as much profit for a charity as possible. We also take part in the UK Maths challenge. In addition, students have the chance to go on a range of trips, including a KS4 Revision Residential.</p>
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