

The Maths department at The Lowry Academy aims to provide students with a secure understanding of mathematical knowledge, categorised according to the following areas: number, algebra, geometry, ratio and proportion, probability, and statistics, meeting the needs of the National Curriculum at KS3 and KS4. The focus of the curriculum is to develop procedural knowledge of the fundamental elements of mathematics in order for students to access further problem solving elements and reason mathematically, whilst fostering a love of maths.

In mathematics our aim is to secure retention of knowledge and a depth of learning which results in students who are confident in taking their studies to the next level, whether that be further qualifications, higher education or into the workplace. We are committed to providing an inclusive curriculum, celebrating and championing diversity and individuality in mathematics.

We have developed and created a curriculum where the daily review grids are used as a tool for distributed practice every lesson to improve recall, retrieval, retention of prior knowledge and to inform and adapt future planning. This has been key in the identifying and addressing gaps in knowledge using KPIs and QLA feedback. At the Lowry Academy, we focus on teaching in a sequence that is carefully designed to continuously interleave content. The Maths Curriculum promotes and emphasises the need for mathematical fluency; all students will study the content outlined in the scheme of learning which has been constructed based on the following principles;

Entitlement: All students in maths learn the knowledge and skills detailed in our curriculum, which are categorised into the strands of number, algebra, geometry, ratio and proportion, probability, and statistics. This ensures that all students can access all areas of maths and develop their abilities to solve increasingly complex problems and reason mathematically.

Coherence: Our curriculum is a progression model that ensures knowledge is revisited and built upon each year. Sequencing allows pupils to make links with prior learning and across strands and is constructed in such a way that classic misconceptions between topic areas are avoided. Our curriculum overviews clearly identify key knowledge and skills, misconceptions, formative assessment opportunities and summative end-point assessments.

Mastery: Mathematical concepts are taught in-depth and continually revisited through careful retrieval of content into future teaching and starter grids. Homework is linked to current and prior learning to build retrieval practice.

Adaptability: Teachers adapt the curriculum for their individual classes and students. This includes adaptations for SEND and appropriate challenge. The curriculum identifies components of each topic and teachers adapt these through their pacing plans to meet the needs of the class. Guidance is provided on adapting for the individual needs of students on the curriculum overview. There is a shared collaborative planning model within the department that teachers then adapt for their own classes. On entry to school, the Year 7s are setted based upon a baseline assessment and MidYis outcomes. Also, students are assessed on whether they are KS3 ready and any concerns are addressed using the Direct Instruction scheme.

Representation: Maths is universal, providing all students with a logical way of viewing the world. The diverse community of the school is reflected by all names and places selected to be inclusive. We believe that a secure understanding of maths is an essential starting point for all young people. Our curriculum ensures that students are exposed to a wider context outside of their immediate experiences.

Maths Curriculum



Education with character: Our curriculum supports students to build logical reasoning, critical thinking and is mentally rigorous. We provide weekly SPARX and Chess clubs in mathematics to ensure our students have access to a high-quality maths curriculum that is both challenging and enjoyable. We provide our students with a variety of mathematical opportunities such as the Junior Mathematics Challenge and educational trips, which will enable them to make the connections in learning needed to enjoy greater depth in learning. We ensure students are confident mathematicians who are not afraid to take risks. We fully develop independent learners with inquisitive minds who have secure mathematical foundations and an interest in self-improvement
