

The study of numbers, shapes, and patterns, and how they are related to the real world

The Maths department at Salford City 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 that 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 starter grids are used as a tool for distributed practice every lesson to improve recall, retention of prior knowledge, and to inform and adapt future planning. This has been key in identifying and addressing gaps in knowledge.

Curriculum Principles

At Salford City 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 small steps, using visual representations where appropriate to build a depth of understanding. Students demonstrate their knowledge in their independent practice through reasoning and non-standard questions. Key skills are continually revisited through careful interleaving 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 to enable all students to make progress and achieve. The curriculum identifies components of each topic and maps out the lesson sequence which teachers adapt to meet the needs of the class. Guidance is provided on adapting for the individual needs of students on the curriculum overview.

Representation: Maths is universal, providing all students with a logical way of viewing the world. The diverse community of Mathematicians is celebrated in our common lesson slide at the beginning of each lesson. 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.

Education with Character: Our curriculum supports students to build logical reasoning, critical thinking, and is mentally rigorous. We provide extra-curricular 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, 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 students with inquisitive minds who have secure mathematical foundations and an interest in self-improvement.