



Maths Curriculum Intent

At Irlam and Cadishead Academy, we believe that every student can achieve success in mathematics. Our curriculum is designed to develop confident, resilient and curious mathematicians who appreciate the beauty, power and relevance of mathematics in the world around them. Through a carefully sequenced curriculum from Key Stage 3 to Key Stage 4, we aim ensure all students develop the knowledge, skills and confidence needed to succeed in GCSE Mathematics and beyond. The curriculum builds upon the principles of fluency, reasoning and problem-solving identified within the National Curriculum, enabling students to make connections between mathematical concepts and apply their understanding in increasingly complex contexts.

At Key Stage 3, students secure the fundamental knowledge of number, algebra, ratio and proportion, geometry, probability and statistics. Through a carefully sequenced curriculum students revisit and deepen their understanding of key concepts, developing mathematical fluency and the ability to reason logically. This strong foundation prepares students for the demands of Key Stage 4 and future study.

At Key Stage 4, students build upon their prior learning through a curriculum that prepares them for success in GCSE Mathematics. Students develop greater independence in selecting and applying mathematical methods, tackling unfamiliar problems and evaluating solutions. The curriculum equips students with the mathematical knowledge and examination skills required to achieve their full potential in GCSE Mathematics, while also developing the critical thinking, resilience and analytical skills valued in further education, employment and everyday life.

We are committed to ensuring that mathematics is accessible to all learners. Through high expectations, challenge for every student and appropriate support where needed, we enable all students to experience success and develop confidence in their mathematical abilities.

Ultimately, our intent is that students leave Irlam and Cadishead Academy as confident, numerate and independent learners who enjoy mathematics, achieve strong GCSE outcomes, and possess the ambition and determination to apply their mathematical understanding in further study, employment and everyday life. This reflects our commitment to empowering excellence and bringing out the best in everyone.

Implementation

At Irlam and Cadishead Academy, a typical mathematics lesson provides opportunities for all students to succeed because:

- Lesson objectives are derived from the National Curriculum and GCSE specifications, with activities adapted through questioning, scaffolding and challenge to meet the needs of all learners.
- Students have access to high-quality lessons that are engaging, ambitious and intellectually challenging.
- Students are provided with opportunities to develop fluency, reasoning and problem-solving skills through a variety of mathematical experiences.
- Learning is carefully sequenced to build upon prior knowledge and strengthen long-term retention.
- Students are encouraged to think independently, justify their reasoning and develop resilience when tackling challenging problems.



- Mathematical vocabulary is explicitly taught and modelled to support communication and understanding.
- Links are made, where relevant and purposeful, to other curriculum areas and real-life contexts, enabling students to appreciate the value and application of mathematics beyond the classroom.
- Retrieval practice, regular assessment and feedback are used to identify misconceptions and support progress over time.

Principles

Entitlement: All students are exposed to an ambitious curriculum encompassing number, algebra, ratio and proportion, geometry, probability and statistics. Students are not taught on separate pathways until Key Stage 4, ensuring all learners have access to the full breadth of mathematical knowledge and the opportunity to develop deep understanding.

Coherence: Our curriculum has been carefully sequenced to ensure knowledge is built progressively over time. Key concepts are revisited and connected across different topics, enabling students to develop a coherent understanding of mathematics while addressing common misconceptions.

Mastery: Mathematical concepts are taught in depth and revisited through deliberate retrieval and interleaving. Retention of knowledge is at the heart of our curriculum. Regular retrieval activities and weekly Sparx Maths homework support students in securing and applying prior learning while building confidence and independence.

Adaptability: Teachers are provided with a fully resourced curriculum that meets the expectations of Key Stage 3, Key Stage 4 and GCSE Mathematics. Teachers have the autonomy to adapt resources and teaching approaches to meet the needs of their classes while maintaining high expectations for all learners.

Representation: Mathematics is a universal language that provides all students with an elegant and logical way of understanding the world. We strive to ensure our curriculum is inclusive and accessible, enabling every student to see themselves as capable mathematicians.

Education with Character: Mathematics develops resilience, logical reasoning, critical thinking and perseverance. Beyond the classroom, students are encouraged to engage in enrichment opportunities such as problem-solving clubs, UKMT challenges, Maths Feast competitions and visits to higher education settings. These experiences help students develop a deeper appreciation of mathematics and raise aspirations for further study and careers that utilise mathematical skills.