



Maths Curriculum Intent

The purpose of the maths curriculum is to provide a secure understanding of mathematical concepts, from basic principles of mathematics to complex topics that combine several areas of study into a single question. The curriculum promotes retention of knowledge and a depth of learning rather than an accelerated curriculum, resulting in pupils who are confident in taking their studies further into sixth form, university and beyond.

The national curriculum states 'Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.' Therefore, the intention for mathematics is to ensure that all pupils become fluent, reason mathematically and solve problems. At Irlam and Cadishead Academy, we teach our children how to make sense of the world around them by developing their ability to calculate, reason and solve problems. We want our children to recognise and understand relationships and patterns in numbers in the world around them. We expect Mathematics to be utilised as a tool beyond the daily Mathematics lessons and beyond the classroom.

In all year groups, there is an intentional focus on numeracy which will support pupils not only in their study of maths but will also enable them to access mathematical questions in other subjects.

Implementation

At Irlam and Cadishead Academy a typical Maths lesson will provide the opportunity for all children as:

- Lesson objectives are taken from the National Curriculum statutory guidelines and activities are differentiated through choice of task, questioning and scaffolded resources.
- Our children have access to high quality lessons that are both challenging and enjoyable.
- We provide our children with a variety of mathematical opportunities, which will enable them to make the connections needed to enjoy greater depth in learning.
- We ensure children 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.
- Links are made, where relevant and purposeful, between other subject areas and Mathematics. This allows children the opportunity to apply Mathematical skills and concepts, as well as enabling children to see that Mathematics is part of everyday life.

Principles

Entitlement: All pupils in maths are exposed to extensive number, algebra, geometry, proportion, and statistics content and are not taught on separate pathways until Key Stage 4. This ensures that all pupils can access all areas of maths and have time to develop their skills and knowledge.



Coherence: Our curriculum has been carefully sequenced to ensure that knowledge is revisited without having a spiral curriculum, and to ensure that classic misconceptions between topic areas are avoided.

Mastery: Mathematical concepts are taught in-depth and continually revisited through careful interleaving of content into future teaching topics. The focus on retention of knowledge is at the core of the maths curriculum; the mastery approach supports this. We build in retrieval practice at the start of every lesson to increase retention of key skills and knowledge over time and pupils. Pupils also complete maths homework each week on Sparx which tests prior knowledge in the curriculum and targets questions based on pupils prior understanding.

Adaptability: Teachers are provided with a fully resourced curriculum that will meet the expectations of the maths curriculum in Key Stage 3 and Key Stage 4. Teachers are expected to adapt these resources and have autonomy in the way they are delivered in the classroom. The curriculum is ambitious for all pupils, regardless of background or need.

Representation: Maths is universal, providing all pupils with an elegant and logical way of viewing the world. Where our resources include names and places, these have been selected to be inclusive. We believe that a secure understanding of maths is an essential starting point for all young people.

Education with character: Mathematics is a common language in which all pupils can solve, analyse, and problem solve. Our curriculum supports pupils to build logical reasoning, critical thinking and is mentally rigorous. In maths we hold clubs on problem solving and reasoning and also partake in inter-school competitions such as Mathsfeast and UKMT. We also take pupils on trips to higher education settings, with a focus on maths related subjects to ensure pupils are aware of the job opportunities available for them if they take up maths post-16.