



A School Family Learning for Life in all its Fullness (John 10:10)

Flourish

Aspire

Achieve

Our Values and Expectations

Curriculum Threads

Our Values

Our Place in the World

Our Well-Being

Our Voice

Our Aspirations

Intention

**Subject
Maths**

At Mary Dean's our aim is to provide a rich and varied curriculum, focused on the delivery of the knowledge, skills, attitudes and values we feel every child needs – thus providing the basis for academic success, a life-long love of learning, and ultimately for our pupils to flourish, aspire and achieve.

We recognise the importance of mathematics throughout each child's every day and future life. It enables children to understand relationships and patterns in both number and space in the world around them. It is essential to help them flourish in everyday life, critical to science, technology and engineering and necessary for financial literacy and most forms of employment. We intend to give each child the self-confidence and resilience to achieve their full potential by ensuring that they have the tools to calculate fluently, reason logically, problem solve and think in abstract ways.

We are committed to providing high-quality maths education for all our pupils, from Early Years to Year 6. We believe that maths is a powerful and creative subject that helps us to understand and appreciate the world around us. We aim to develop confident and curious mathematicians who can reason, problem-solve and communicate mathematically.

Maths forms an important part of our broad and balanced curriculum where we endeavour to ensure that children develop an enjoyment and enthusiasm for maths that will stay with them throughout their lives and empower them in future life. We believe that unlocking mathematical fluency is an essential life skill for all learners and is a prerequisite to being able to reason and solve problems mathematically. Our aim is to develop a positive culture of deep understanding, confidence and competence in maths that produces strong, secure learning. As a school, we recognise that the key to unlocking the potential in our children is through the development of basic mathematical skills and the understanding of mathematical concepts.

Through Teaching for Mastery, we intend for our children to develop a deep-rooted and long-term understanding in all areas of Maths, allowing them to become adept in the three overarching aims of the National Curriculum. By adopting a concrete, pictorial, abstract approach in lessons, every child has access to a wide range of quality manipulatives, models, diagrams and representations, which supports their conceptual understanding.

	<p>We want all our pupils to become fluent in the fundamentals of maths by-</p> <ul style="list-style-type: none"> ● Developing conceptual understanding and the ability to recall and apply knowledge rapidly. ● Reasoning and problem solving by applying mathematics to a variety of increasingly complex problems. ● Building on their knowledge and understanding from EYFS to Year 6. ● Developing resilience that enables them to reason and problem solve with increased confidence.
<p>Implementation</p>	<p>Maths lessons take place daily across the school and are delivered through quality first teaching using a ‘spiral’ curriculum. This approach introduces concepts progressively and revisits them regularly, thereby giving children the opportunity to build on and develop their skills, and ultimately to achieve mastery of them.</p> <p>We follow the principles and practices of teaching for mastery, as promoted by the National Centre for Excellence in the Teaching of Mathematics (NCETM)¹. Teaching for mastery is an approach that enables all pupils to develop a deep and connected understanding of maths, and to acquire fluency, reasoning and problem-solving skills. It is based on the idea that every child can succeed in maths, with good teaching and a positive mindset.</p> <p>EYFS and Key Stage 1 teachers are currently working with the NCETM Maths Hubs in their year group specific work groups to implement the 'Mastering Number Programme 2023-24.' This programme develops solid number sense, including fluency and flexibility with number facts, which will have a lasting impact on future learning for all children. This programme also involves high quality professional development for teachers. The mastering Number programme is wholly consistent with teaching for mastery.</p> <p>In EYFS, we recognise the importance of children becoming grounded in mathematical concepts as early as possible. To facilitate this, we ensure that there are many rich opportunities for our children to build and apply their understanding across all areas of mathematics, with a strong emphasis on counting confidently; gaining a deep understanding of numbers to 10; spotting patterns and relationships within and between numbers; calculating simple addition and subtraction problems; and developing their spatial reasoning skills.</p> <p>All children have dedicated time to work with staff, both in small groups and on a one-to-one basis, where learning is tailored to individual needs and ability. Furthermore, there are a wide range of carefully planned maths activities and games within the continuous provision for the children to access. As children transition from Reception into Year 1, the majority will have developed a secure base of knowledge and vocabulary.</p> <p>Children’s independence and confidence is further developed by using the ‘Counting Collections’ approach which uses paired counting and physical objects, which supports their development in counting and subitising, as well as comparison and composition of numbers. The children can choose what they count, how they count and how they record their counting. This resource is already showing a positive impact on young children’s confidence and understanding.</p>

		<p>In both Key Stage 1 and Key Stage 2, lessons are carefully planned to include fluency, reasoning and problem solving and to ensure there is appropriate challenge for all learners. We use the NCETM’s curriculum and assessment materials to plan and deliver engaging and coherent maths lessons that meet the needs of our pupils. We also use the NCETM’s podcasts, videos and news features to keep up to date with the latest developments and innovations in maths education¹.</p> <p>Concrete manipulatives and pictorial representations are used to support conceptual understanding and to make links across topics. Fluency is further developed through daily mastery sessions where children repeat, reinforce and revise key skills. All pupils are individually assessed for rapid recall of number bonds for Year 1 and Year 2 (Beat that Maths) and times tables for Year 3 to Year 6 (Times Tables Rock Stars app) to ensure that they are obtaining and retaining key knowledge.</p> <p>Teachers implement the schools agreed calculation policies for progression in written and mental calculations. Pre and post unit assessments (RTPs) are used where appropriate along with termly assessments which help teachers to gather an understanding of their pupil’s existing and developing knowledge and skills. Correct mathematical vocabulary is used by all teachers and this is discussed with and explained to children who are then encouraged to use it independently when talking about maths. Pupil talk is highly valued as a means of developing the children’s skills in mathematical reasoning and ensuring they acquire a broad mathematical vocabulary.</p> <p>Pupils progress is regularly tracked and if they are falling behind, they are identified and then timetabled interventions for maths take place. (particularly those children with SEND); all other children receive regular group support as part of their maths lessons with further support for individuals or small groups where a need is identified. All year groups are formally tested at the end of each term using PUMA tests.</p> <p>We work collaboratively with our local Maths Hub², which is part of a national network of 40 hubs coordinated by the NCETM¹. The Maths Hub provides us with opportunities to access high-quality professional development, resources and guidance for maths teaching in all phases³. We also benefit from the expertise and support of other maths professionals in our area and share our own good practice with them.</p>
<p>Impact</p>		<p>We are proud to be part of the NCETM’s maths community, and we strive to enhance our maths teaching and learning in line with their vision and values. We hope that this will lead to our pupils showing increased confidence, enjoyment and achievement in maths.</p> <p>Some of the specific outcomes we are aspiring to are:</p> <ul style="list-style-type: none"> ● Our pupils will have a deeper and more connected understanding of maths concepts and procedures. They will be able to explain their reasoning and justify their answers using appropriate mathematical language and representations. ● Our pupils will develop a growth mindset towards maths. They will be more willing to take on challenges, learn from mistakes and persevere with difficult tasks. They will also support and learn from each other through collaborative and cooperative activities. ● Our pupils will improve their fluency, accuracy and efficiency in maths. They will be able to recall and apply facts and skills with ease and speed and use appropriate strategies and methods to solve problems in different contexts.

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| | | <ul style="list-style-type: none">• Our pupils will enhance their mathematical thinking and creativity. They will explore, investigate and discover patterns and relationships in maths, and use their imagination and intuition to generate and test conjectures and generalisations.• Our pupils will increase their appreciation and enjoyment of maths. They will see the relevance and beauty of maths in the world around them and express their curiosity and wonder about mathematical phenomena.• An increasing number of children will meet end of year expectations. |
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