



Lighting up a love of learning

Mathematics

It is our belief that all children have the right and the capabilities to become confident and competent mathematicians. Our aim is to develop in each child a deep, conceptual understanding of mathematical skills, knowledge and vocabulary through a mastery approach to maths. Our children are taught the same age-appropriate content as their peers through sequences of connected lessons using manipulatives and representations that take them through a concrete-pictorial-abstract approach to understanding key mathematical concepts.

Within our trust schools, we work together to create our own mastery maths curriculum tailored to meet the needs of our children. Our primaries plan predominantly from the National Centre for Excellence in the Teaching of Mathematics (NCETM) in line with the National Curriculum supported by a range of specifically chosen, quality resources in order to cover key objectives using small steps. Shared schemes (created in partnership with our trust secondary colleagues) such as KS2 revision and Secondary-Ready transition learning are used across the trust to provide consistency for all our pupils.

The trust works closely with the Boolean Maths Hub; all primary maths leads are involved in sustaining mastery workgroups and each trust primary engages with the 5-8 transition hub as well as Mastering Number.

In all year groups, a range of manipulatives are used to ensure children have the opportunity to work practically with number concepts before moving on to pictorial and abstract representations. Misconceptions are planned for and children are encouraged to make links between the different mathematical concepts they learn. Mathematical oracy sits at the heart of our teaching and learning; early on, children are taught and encouraged to use correct mathematical terms and are given opportunities to learn and hone skills in 'maths talk'.

Throughout their learning journey, it is our aim that children make strong links between key concepts in maths. They become confident in explaining their mathematical thinking and reasoning using vocabulary which demonstrates their understanding. They are able to recall specific knowledge required for solving problems and confidently draw upon existing skills in order to solve problems.

In addition to the daily maths lesson which focuses on one small step, children are given specific daily or weekly (depending on age) fluency teaching in order to develop the building

blocks of mathematics. Although conceptual fluency is practised as part of the daily mastery lesson, we believe that removing the 'cognitive overload' allows children to focus entirely on the small step being taught. Procedural fluency is therefore given additional dedicated time elsewhere.

In the Early Years and Foundation Stage, children are introduced to the NCETM's Mastering Number program which allows them to secure firm foundations in number sense. This is then continued through KS1 where children develop fluency with whole numbers, counting and place value. They are taught to use the four operations using a practical approach such as concrete objects and manipulatives. Through mastery lessons, children develop their ability to recognise, describe, compare and draw shapes and experience a range of measures. By the end of KS1, children can confidently recall number bonds to 20 and show a precise understanding of place value.

Mastering Number is then continued throughout year 3 and the Mastering Number KS2 program is introduced through years 4 and 5. Alongside this, we use a multiplication tables approach (based on the Boolean Maths Hub's recommendations) in order to secure multiplication and division facts by the end of year 4. Through mastery lessons, children are taught efficient formal written methods to perform calculations accurately with increasingly larger numbers and are given opportunities to solve a range of problems involving fractions, decimals, percentages and ratio. Children learn to develop their mathematical reasoning in order for them to analyse and confidently describe relationships between numbers, fractions and shapes. They are able to classify shapes and are taught the vocabulary they need to describe them. By the end of KS2, children use algebra as a means for solving a variety of problems and are fluent in written methods for all four operations (including long multiplication and division).

Children of all ages are given regular opportunities to practise and apply the knowledge and skills they have been taught through a range of carefully crafted problems that include mathematical reasoning. Children not achieving age related expectations are given the opportunity to further develop their understanding through precision teaching intervention sessions in order to close the gap using the NCETM Ready to Progress guidance.

Our trust primary leaders of mathematics work closely together with the assistant director to ensure consistency in the teaching and learning of maths across all schools. Maths is promoted and celebrated widely within and across our trust primaries; staff and children alike are positive and passionate about maths.