

The Maths Curriculum at Coates Primary School

At Coates Primary School, we believe that all children can achieve in mathematics! There is no such phrase as a 'Maths person', and that all children can be fluent in the fundamentals of mathematics. Children should be able to reason mathematically and solve problems by the application of their mathematical understanding. We endeavour to ensure that children develop an enthusiastic attitude towards mathematics that will stay with them throughout their lives.

Intent

Maths is a journey and long-term goal, achieved through exploration, practice and application over time. At each stage of learning, children should be able to demonstrate a deep, conceptual understanding of the new knowledge being learned and be able to build on these skills over time. At Coates Primary School we are developing the deep and deepest levels of learning using the mastery approach. Typical Maths lessons will provide the opportunity for all children, regardless of their ability, to solve Fluency, Reasoning and Problem Solving challenges; either to develop new mathematical skills or deepen their prior conceptual understanding.

Implementation

Multiple representations for all

Objects, pictures, numbers and symbols are everywhere. The mastery approach incorporates all of these to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding. Together, these elements help cement knowledge so children truly understand what they have learned. Children at Coates Primary School are encouraged to use concrete resources to represent mathematical concepts. Pupils use models and images to draw out their ideas which helps them to visualise abstract symbols and number problems.

The 3 stages are:

Concrete – children have the opportunity to use objects and manipulatives to help them understand and explain what they are learning.

Pictorial – children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

Abstract – With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

Impact

Children at Coates Primary School will have rapid and automatic recall of facts and procedures. The children will be confident to tackle new problems drawing on a range of strategies. The children will have the flexibility and fluidity to move between different contexts and representations of mathematics. They will be able to recognise relationships and make connections. They will be able to explain, reason and justify their ideas through a range of problem solving challenges. A mathematical concept or skill has been *mastered* when a child can demonstrate these skills using key vocabulary to explain their ideas, and can independently apply concepts to new problems in unfamiliar situations.