

Mathematics

Intent

At Newton Primary School, our journey for mathematics starts in the Early Years. We follow a Curriculum Progress Model that covers the six areas of mathematics and ensures progression from Nursery to Reception with clear links into the Year 1 Mathematics Curriculum. Teachers identify children who need further support and challenge and address these needs through adult-led activities and carefully thought-out enhancements in the continuous provision. The journey continues in **Years 1 – 6** through the implementation of the 2014 **National Curriculum**.

We ensure that our children:

- Become **fluent** in the fundamentals of mathematics.
- Are able to **reason** mathematically.
- Apply their mathematical understanding to routine and non-routine problems.

Implementation

We have outlined the order in which we will teach our units of work to enable us to plan coverage of the entire National Curriculum whilst allowing us to prioritise the DfE Ready to Progress statements. Teachers consider the needs of their cohort before determining how many weeks they will spend on each topic. The NCETM Teaching for Mastery Assessment questions are built into units of work to enable teachers to effectively assess children's understanding at a Mastery and Greater Depth level within a unit of work. Fluency, reasoning and problem-solving skills are embedded within mathematics lessons and are developed consistently over time. By ensuring that children secure their fluency skills before moving on to more complex mathematics we develop children's confidence to tackle a variety of problems either independently or in collaboration with their peers. All children are given the opportunity to reason at their own level using the 5 stages of reasoning, describe, explain, convince, justify and prove.

First 4 Maths

The First for Maths exemplification is used by our teachers to plan their lessons. Teachers are consistently improving their CPD by watching the First for Maths videos and adapting their practice to meet the needs of the pupils. Teachers use the QLA from NFER tests and SATs Practice materials to identify any gaps in learning and to ensure that the pupils master key concepts before moving their learning forward. The NCETM Assessment materials and the DfE/NCETM Ready to Progress materials are used to drive short-term planning and integrate a range of resources to supplement including White Rose, NCETM, NRich and Times Tables Rockstars.

Fluency

There are 5 fluency sessions per week throughout the school. 3 times per week these sessions revisit and consolidate DfE Ready to Progress Statements to ensure that children are retaining the core skills identified to prepare children for their next year group. Teachers also use these sessions to address any gaps in learning that have been identified within their Daily Mathematics Lesson. Teachers ensure that fluency is developed thoroughly during lessons through the "Strive for Five" model, before moving on to varied questioning. Fluency is then revisited during retrieval time. Children begin their day with opportunities to revisit previous areas in maths.

Reasoning

Pupils are encouraged to reason about the structures of mathematics as they are working through their activities. This includes reasoning about the strategies that they are using during the teaching and learning of fluency and the methods of calculation. This is then consolidated with a selection of mastery level reasoning activities.