



Maths Curriculum

Our Maths curriculum follows the Curriculum Prioritisation Materials from the NCETM. This provides detailed professional development materials for teaching staff, a clear sequence of learning and a progression of skills for pupils to build their understanding throughout their time at the school. Pupils in KS2 follow a two-year rolling programme whilst pupils in KS1 are taught in distinct year groups. We try as much as possible to link Mathematics concepts and understanding to real-life scenarios whilst exposing children to word based problems.

Intent

Our intention is that all pupils become confident, fluent, and resilient mathematicians who understand the mathematics they are learning and can apply it in a range of contexts. We believe that all pupils are capable of learning mathematics and therefore provide an ambitious, curriculum which is inclusive by design, in which pupils develop their understanding through carefully sequenced learning.

Our curriculum develops the three interconnected aims of mathematics: **fluency, reasoning and problem solving**. Pupils develop secure knowledge of number, calculation, fractions, geometry, measurement, and statistics while making connections between different areas of mathematics.

We place a strong emphasis on developing conceptual understanding alongside procedural fluency. Pupils are encouraged to notice patterns and relationships, make connections, explain their thinking, reason mathematically and solve increasingly challenging and unfamiliar problems.

We aim for pupils to use precise mathematical vocabulary to communicate their ideas clearly and confidently. Through carefully selected representations, manipulatives and variation, pupils are supported to understand the underlying structure of mathematics rather than simply memorising procedures.

We want our pupils to leave primary school with secure mathematical knowledge, a positive attitude towards mathematics and the confidence to apply their learning independently in school, everyday life, and future learning.

Implementation

A daily maths lesson is taught in all classes across the school. As a school we promote a Teaching for Mastery Pedagogy to teaching mathematics which assumes that all children are capable of learning maths. Our lessons are designed to include the 'Five Big Ideas' of fluency, coherence, mathematical thinking, variation, and representation & structure.

All pupils in a class will work on the same focus with different support provided to enable all of them to access the mathematics independently. We do not routinely restrict pupils' access to mathematical concepts by assigning different groups to different curriculum content. Instead, teachers use representations, manipulatives, carefully planned questioning, scaffolding and additional support to enable pupils to access the same ambitious mathematical learning. Where pupils have not secured prerequisite knowledge, timely additional teaching is provided so that misconceptions and gaps do not become embedded.

A range of representations and manipulatives are used to expose the structure of the maths which in turn supports pupils to demonstrate their understanding. Lessons use interactive whole-class teaching, with carefully planned back-and-forth interactions between teacher and pupils through questioning, explanation, demonstration, discussion, and short tasks.

Reasoning and problem solving are integral to mathematics teaching rather than being taught as separate activities. Pupils are regularly encouraged to explain and justify their thinking, identify patterns and relationships, make connections, prove or disprove statements and solve problems in both familiar and unfamiliar contexts. Teachers use questioning and discussion to develop pupils' ability to articulate their mathematical reasoning. STEM sentences are used to support pupils to express their mathematical thinking.

In addition to the daily maths lessons, pupils also receive a daily 'Early Morning Maths' session. Each morning children from Key Stage One and above will be given 15 minutes to complete a selection of questions from across the maths curriculum that they have already been taught. Early Morning Maths provides regular spaced retrieval and practise to strengthen pupils' fluency, recall and flexibility, enabling previously learned knowledge and strategies to be accessed efficiently when tackling new learning.

Times Tables / Number Bonds – Key Stage One children receive a lesson four times per week from the NCETM Mastering Number Programme which focuses on securing their understanding of the additive relationships, including their number bonds. Pupils in Year 3 have a 10–15-minute times tables session three times per week to learn their times tables facts. In years 4 & 5, pupils receive a daily lesson from the NCETM Mastering Number at KS2 Programme which focuses on the multiplicative relationship and supports them to develop automaticity with key facts in addition to a secure knowledge and understanding of multiplicative relationships and their application to other areas of the maths curriculum. Pupils also have regular opportunities to develop automaticity with key multiplication and division facts. These sessions combine conceptual understanding, visual representations, systematic practice, and retrieval. Digital resources such as Times Tables Rock Stars provide additional opportunities for pupils to practise and recall multiplication facts in school and at home.

Impact

The impact of our mathematics curriculum is that pupils develop increasingly secure mathematical knowledge and understanding, enabling them to work with greater fluency, confidence, and independence.

Pupils demonstrate their learning through their ability to recall and apply key mathematical knowledge, explain their thinking using appropriate mathematical vocabulary, make connections between mathematical ideas, reason about relationships and solve problems in a range of contexts.

Assessment is used throughout the teaching sequence to identify pupils' starting points, check understanding, identify misconceptions, and inform subsequent teaching. Teachers use assessment information to determine whether pupils are ready to progress or require further teaching and practice.

Prior to beginning each unit of work, pupils are assessed against the relevant Ready to Progress criteria to identify prerequisite knowledge and potential gaps. This information informs the starting point and planning for the unit. At the end of the unit, assessment against the relevant criteria provides evidence of pupils' developing understanding.

Termly fluency, reasoning and problem-solving assessments provide additional information about pupils' ability to apply their mathematical knowledge independently across the curriculum. Teachers use this information alongside classroom assessment, pupil work, and professional judgement to identify pupils who require additional support or further challenge.

Assessment information contributes to the school's APDR cycle, enabling timely intervention where pupils have not yet secured key knowledge or understanding. The impact of these interventions is monitored to ensure that pupils make progress towards the intended learning.

The impact of the curriculum is therefore seen not only in assessment outcomes, but also in pupils' increasing ability to reason, communicate mathematically, make connections, and apply their knowledge confidently and independently.