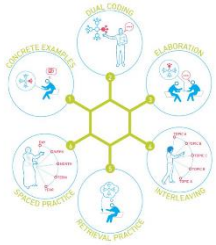
Maths Intent, Implementation and Impact

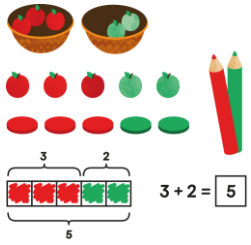
Intent

At Stoke Park Infant School, we believe mathematics is an important part of children's development throughout school, right from an early age. We intend on delivering a curriculum which:

- Is high quality and both challenging and enjoyable
- Allows children to be part of creative and engaging lessons that will give them a range of opportunities to explore mathematics following a mastery curriculum approach
- Provides equal opportunities for children to apply their mathematical knowledge to other subjects (cross-curricular links)
- Is in line with the expectations in the National Curriculum 2014
- Makes rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems
- Is committed to ensuring that children are able to recognise the importance of maths in the wider world and that they are able to use their mathematical skills and knowledge confidently in everyday life, in a range of different situations
- Mathematics in our school is enhanced by our individual class working walls, designed to aid children through each Hampshire Maths Planning Strategy unit learning journey
- Give pupils a chance to believe in themselves as mathematicians and develop the power of resilience and perseverance when faced with mathematical challenges

Implementation





Our mastery approach to the curriculum is designed to develop children's knowledge and understanding of mathematical concepts from the Early Years through to the end of Y2. We are outward looking and creative in our approach to implementing a high quality mathematics curriculum.

Maths Curriculum Statement 2022-23

Teaching and Learning, Content and Sequence

- In school, we follow the New Framework for Early Years as well as the national curriculum. We use the Hampshire Maths Planning Strategy in KS1 and plan using a Task Variation model with problem-solving at its core. The EYFS use White Rose Maths Early Years planning.
- Staff have several materials that are used to enhance their planning including White Rose Maths, I See Reasoning, NRICH tasks and NCETM Teaching for Mastery – these are used across KS1 allowing children to be exposed to a variety of different types of learning and problems. The ongoing engagement with accompanying NCETM documents continues to ensure that all staff at all levels understand the pedagogy of deepening knowledge, particularly in mastery at greater depth
- In Early Years, the 'Number Blocks' materials from NCETM helps colleagues to have a clearer understanding of how children build early number sense and how best to support that learning
- We use 6 Strategies of Effective Learning: retrieval practice, spaced practice, interleaving, dual coding, concrete examples and elaboration. These strategies underpin our planning and every maths lesson.
- Children are taught through clear modelling and have the opportunity to develop their knowledge and understanding of mathematical concepts. The mastery approach incorporates concrete, pictorial and abstract ideas to help children explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding at all levels
- The HMPS uses a cyclical approach, to enable the achievement of 'mastery' over time. Practice, repeating, reinforcing and consolidation plays a central role and is all built into the formal planning across the school. Carefully designed variation within this builds fluency and understanding of mathematical concepts
- There is coherent progression seen in planning within each unit and activities in the EYFS develop knowledge and skills of key learning.
- Reasoning and problem solving are integral to the activities children are given to develop their mathematical thinking
- A love of maths is encouraged throughout the school via links with other subjects, applying every growing range of skills with growing independence
- Pupils who grasps concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.
- Children with additional needs are included in whole class lessons and teachers provide scaffolding and relevant support as necessary. For those children who are working outside of the year group curriculum, individual learning activities are provided to ensure their progress.

- Children are encouraged to explore, apply and evaluate their mathematical approach during investigations to develop a deeper understanding when solving different problems
- Resources are readily available to assist demonstration of securing a conceptual understanding of the different skills appropriate for each year group

Leadership, Assessment and Feedback

- Feedback is given on children's learning in line with our marking/feedback policy. Formative assessment within every lesson helps teachers to identify the children who need more support to achieve the intended outcome and who are ready for greater stretch and challenge through planned questioning or additional activities. Teachers then use this assessment to influence their planning and ensure they are providing a mathematics curriculum that will allow each child to progress.
- In order to support teacher judgements, children may be assessed using current and reliable tests in line with the national curriculum for maths. Gap analysis of any tests that the children complete is undertaken and fed into future planning.
- Summative assessments are completed at the end of the academic year and reported to parents in the end of year report.
- Children's progress is monitored throughout half termly pupil progress meetings and children identified as not on track are supported through the necessary intervention so that all children keep up.
- Good practice is always shared between staff and all CPD is used to inform teaching and learning across the school.
- Maths Lead attends regular core provision sessions delivered by Hampshire Maths Team and Y2 staff attend standardisation training.
- We endeavour to monitor the teaching of maths on a termly basis through book scrutinises, learning walks and lesson observations.

Impact

- The chance to develop the ability to recognise relationships and make connections in maths lessons.
- Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations.
- Fostering a growth mind set so that all children experience challenge and success in Mathematics and are not afraid to take risks.
- The flexibility and fluidity to move between different contexts and representations of maths.
- Children 'have a go' and choose the equipment they need to help them to learn, along with the strategies they think are best suited to each problem.
- Children are developing skills in being able to articulate and are able to verbally, pictorially and in written form reason well.

- Children show a high level of pride in the presentation and understanding of their work.
- Our maths books show a range of activities displaying evidence of fluency, reasoning and problem solving.
- Our feedback and interventions are supporting children to thrive to be the best mathematics they can be, ensuring a greater proportion of children are on track.
- Our school standards are high, we moderate our books both internally and externally and children are achieving well, with the achievement at the end of KS1 above the national average (2017-2019) and an increase in the proportion of children demonstrating greater depth, at the end of each phase (EYFS and KS1) (2017-2019).