



Mathematics Policy

Hutton Church of England Primary School

Introduction

At Hutton Church of England Primary School, we are dedicated to offering an exceptional education that nurtures the intellectual curiosity of all our pupils. Mathematics plays a central role in this, providing the foundation for logical thinking, problem-solving, and creativity. We believe that every child can develop a deep understanding of mathematics, and through our Mastery Maths approach, we provide a curriculum that ensures all pupils achieve excellence in this vital subject.

This policy reflects our commitment to the teaching and learning of mathematics, outlining our approach to delivering a mastery curriculum. It is informed by the principles of the Mastery Maths philosophy, which emphasizes conceptual understanding, fluency, reasoning, and problem-solving.

Vision and Aims

- At Hutton Church of England Primary School, our aim is to develop confident, independent, and resilient mathematicians who:
- Acquire a deep understanding of mathematical concepts, ensuring they are able to apply this understanding flexibly in a variety of contexts.
- Master key mathematical skills, enabling them to recall and apply these skills efficiently and accurately.
- Engage in mathematical reasoning, confidently explaining and justifying their thinking, and solving problems with resilience and creativity.
- Develop a love for mathematics, appreciating its relevance in both academic and real-life contexts.
- Achieve their full potential, regardless of their starting point, through high-quality, tailored teaching that ensures every pupil experiences success.

Curriculum Structure

Our mathematics curriculum is designed around the principles of Mastery Maths, focusing on developing a deep and lasting understanding of mathematical concepts. We ensure that pupils are not moved on until they have mastered the current content and are able to apply their learning confidently in different contexts.

The curriculum follows the structure outlined by the National Curriculum, with a focus on ensuring that all pupils acquire the knowledge and skills required to become proficient mathematicians.

The key areas covered are:

Number and Place Value: Developing a firm understanding of numbers, their place in the number system, and their relationship to each other. Pupils will gain fluency in representing numbers in multiple ways, including with concrete objects, pictorial models, and abstract symbols.

Addition, Subtraction, Multiplication, and Division: Ensuring pupils develop efficient, flexible methods for performing the four operations. These are introduced using concrete resources and progressively move to abstract methods.



Fractions, Decimals, and Percentages: Pupils will build a deep understanding of fractions, starting from simple concepts like halves and quarters, progressing to more complex ideas like equivalent fractions, decimals, and percentages.

Measurement: Pupils will develop a practical understanding of units of measurement (length, weight, volume, time, money) and learn to apply this knowledge in real-life contexts.

Geometry: Focusing on the properties of shapes, position, and direction, pupils will use mathematical vocabulary to describe and reason about geometric concepts.

Statistics: Pupils will learn to collect, represent, and interpret data, including constructing bar charts, line graphs, and tables, enabling them to draw conclusions from data.

Algebra (Upper Key Stage 2): Introducing the concept of algebra, pupils will develop an understanding of simple patterns, sequences, and the relationship between numbers.

Mastery Approach to Teaching and Learning

The mastery approach emphasizes that all pupils should achieve a deep, conceptual understanding of the subject before progressing to more advanced topics. Teachers ensure that every pupil has a strong grasp of a concept before moving on, allowing them to apply their knowledge flexibly in new contexts.

Concrete, Pictorial, Abstract (CPA) Approach:

This approach underpins all teaching:

Concrete: Pupils start by using physical objects (such as counters or base-ten blocks) to represent mathematical ideas.

Pictorial: Next, pupils use visual representations (such as bar models or number lines) to support their understanding.

Abstract: Finally, pupils represent the ideas using numbers, symbols, and formal mathematical notation.

Problem-Solving and Reasoning:

Pupils are encouraged to engage in problem-solving activities that require them to apply their mathematical knowledge to unfamiliar situations. They are prompted to reason logically, make connections between ideas, and explain their thinking. This helps to develop critical thinking and mathematical fluency.

Differentiation:

Differentiation is embedded into our approach through:

Challenge: All pupils are challenged to develop deep conceptual understanding. Teachers use open-ended problems, which allow pupils to explore concepts in greater depth.

Support: For pupils who require additional help, targeted interventions, scaffolding, and the use of manipulatives ensure they fully grasp concepts before moving on.

Enrichment: For those who demonstrate mastery, additional problems and challenges deepen their thinking and extend their learning.



Mathematical Language:

A key focus of our teaching is the development of mathematical language. Pupils are encouraged to articulate their thinking using accurate terminology and to explain and justify their reasoning both orally and in writing. This helps them internalize mathematical concepts and communicate their understanding clearly.

Assessment and Tracking Progress

Formative Assessment: Teachers use ongoing, formative assessments to monitor pupils' understanding and guide future planning. This may include questioning during lessons, observations, mini-whiteboard activities, and practical tasks. Regular feedback enables teachers to address misconceptions and ensure pupils stay on track.

Summative Assessment: At the end of each unit or term, pupils will complete assessments designed to measure their understanding of the concepts covered. These assessments provide teachers with valuable data to inform future teaching and identify areas for consolidation.

Tracking Progress: We track pupil progress using an online pupil tracker. This enables us to monitor the achievement of all pupils, ensuring that every child is progressing towards mastery. Teachers set individual targets and provide tailored interventions where needed.

Parental Involvement:

Parents are regularly updated on their child's progress through parent-teacher meetings, reports, and opportunities to support learning at home. We believe that a collaborative approach between home and school helps pupils achieve their full potential.

Inclusion and Equal Opportunities:

At Hutton Church of England Primary School, we are committed to ensuring that all pupils, regardless of their background, ability, or need, are fully included in the mathematics curriculum. Our policy ensures that:

All pupils have access to high-quality teaching and learning that is appropriately differentiated to meet their needs.

Pupils with SEND receive targeted support and interventions, ensuring they have access to the full curriculum and are supported to achieve their potential.

More able pupils are provided with appropriate challenges to deepen their understanding and encourage independent thinking.

Pupils with EAL are provided with the necessary resources and support to ensure they can access the curriculum and progress in mathematics.



Resources

We use a wide range of resources to support teaching and learning, including:

- Concrete manipulatives including; base-ten blocks, counters, place value grids and number lines to support understanding.
- Mathematical lessons resources include; White Rose, NCETM and I See Maths which align with the mastery approach.
- Digital resources include; Numbots, Times Tables Rock Stars, Maths.co.uk, which reinforce learning and engage pupils interactively.
- Visual aids such as bar models, number lines, charts, support pupils in understanding abstract concepts.
- Fluency resources include; Mastering Number in KS1 and KS2, Systematic Times Tables and Number Sense Maths.

Monitoring and Evaluation

Subject Leadership:

The mathematics subject leader is responsible for overseeing the implementation of this policy, ensuring that the mastery approach is consistently applied throughout the school. Regular monitoring, including lesson observations, work scrutiny, and pupil interviews, ensures high standards of teaching.

Review and Improvement:

This policy will be reviewed annually to ensure its continued relevance and effectiveness. Feedback from staff, pupils, and parents will be used to inform any adjustments or improvements.

Conclusion

At Hutton Church of England Primary School, we are dedicated to providing a maths education that ensures every pupil achieves excellence in mathematics. Through our Mastery Maths approach, we empower pupils to become confident, capable, and creative mathematicians. By fostering a deep understanding of mathematical concepts, alongside a love of learning, we aim to equip our pupils with the skills they need to succeed both in school and beyond.

Written: March '25

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