

Mathematics Policy



Intent

The National Curriculum for mathematics aims to ensure that all pupils become fluent, reason mathematically and can solve problems. We believe that a high- quality Mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics and a sense of enjoyment and curiosity about the subject.

Knowledge Rich and Academic

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During each lesson all children use apparatus as visual aids. As they make progress in the lesson, they move towards using pictorial and abstract representations for Mathematical concepts. At St Thomas' we are confident that our mastery-based approach and spiral curriculum enthuses children about Maths. It ensures they can master Mathematical skills and concepts which enable them to continue learning as they progress through school.

Reading and Vocabulary

Reading is the starting point for each of our daily Maths lessons. All lessons start with a daily 'In Focus' real life problem which the children read and interpret to demonstrate understanding. We discuss key vocabulary and this is modelled in context throughout Maths lessons by teachers and through the lesson resources. Vocabulary is collated on class working walls and referred to during lessons. The use of workbooks ensures the children are reading and understanding key Mathematical vocabulary

Christian Values

Our vision statement, “Let your Light Shine,” is rooted in the words of Jesus in Matthew 5:16 and reflects our belief that every child is uniquely created and deeply valued. The lighthouse symbol, central to our identity, reminds us that Christ is a constant light and guide. Through our Lighthouse curriculum, we seek to nurture, support and inspire each pupil so they can discover their God-given uniqueness, find their path and shine brightly through their learning, actions and relationships. This vision is reflected in our mathematics lessons, where children work with ‘Maths Mates’. Through mixed-ability partner work, pupils develop collaboration and communication skills as they share resources and discuss their thinking. These partnerships also help children build friendships across the class while learning to support one another. At the same time, each child is encouraged to take responsibility for their own learning by checking their work carefully and ensuring that it clearly communicates their thinking and is presented to the highest standard.

Celebrate Diversity

We celebrate the work of famous Mathematicians during our whole school Maths weeks. We enthuse the children about achievements of individuals from different genders and cultures. As part of Maths No Problem resources different foods and cultural experiences are introduced through ‘In focus’ problems. Discussion ensures the children understand more about the lives of others.

Experiences and Life Skills

We prioritise the mastery of conceptual Maths understanding through the use of real life/ everyday problems. Children explore and investigate. Communication is key as they work alongside peers to reason, explain and justify their thinking using mathematical vocabulary.

Excellence

At St Thomas’ we use Maths No Problem resources as we are committed to ensuring that every child develops an understanding and love of maths. With the right kind of teaching and support we can ensure this happens. Our Maths curriculum uses a problem- solving approach. Teachers carefully plan open ended, challenging questions which enable our children to make connections, identify patterns and draw conclusions about Mathematical concepts and problem solving. Misconceptions are addressed as they arise and teachers actively engage children in proving their ideas, they are challenged to extend this too. Daily children journal their Mathematical thinking and they aim for excellence in presentation and clarity of conceptual understanding.

Implementation

Use of resources

Maths lead and class teachers ensure that they have all of the required resources to teach lessons, each class has their own set of practical resources. Other class resources include counting apparatus, measuring equipment, pupil workbooks and textbooks. There is also a shared resource area with extra equipment for teachers to access when appropriate. Teachers to discuss with Maths lead if any extra resources are required.

Assessment

Assessment of Maths is ongoing. It should continuously be used to inform teaching. Rapid marking and questioning during lessons enable teachers to make assessments. Rapid intervention takes place to address misconceptions, any gaps in pupils’ knowledge and conceptual understanding. Teachers should assess children on non-negotiable learning objectives after every lesson and use this to inform their assessments regarding interventions and next steps for progress and mastery.



Working walls

‘Let your Light Shine’ Matthew 5:16



Working walls are to be updated frequently. These are to identify the unit being studied and should include key vocabulary alongside examples of appropriate calculations and strategies. Working walls should be referred to in lesson and pupils should use them to aid learning.

Expectations: Maths is taught daily in KS1 and KS2 for between 60 and 75 minutes. We prioritise the development of basic skills and arithmetic alongside problem solving, fluency and reasoning.

- **Structure of lesson:**

In Focus-

Includes real life questions related to various lesson objectives as an introductory activity for pupils. Pupils work collaboratively to discuss and explore methods to solve the problem. They use concrete materials to support them and to help them represent their thinking. They discuss, reason and explain. In journals they record their ideas and are encouraged to describe methods and explain their thinking. As they progress through the school they evaluate more. These journals provide pupils with opportunities to show their understanding of the mathematical concepts learnt.

Let's Learn-

This introduces new concepts through a Concrete, Pictorial, Abstract approach with the use of engaging pictures and manipulatives. Guided examples are provided for reinforcement. Teachers reinforce non-negotiable learning objectives through direct teaching

Guided Practice-

This comprises of questions for further consolidation and for the immediate evaluation of pupils' learning. Children complete tasks either independently, with a peer or collectively as a class. Discussion follows to encourage reasoning and mathematical fluency to be shown.

Workbooks-

Pupils independently answer a range of questions directly related to the National Curriculum learning objective. These are arranged in a non- uniform way to allow for children to evidence their mastery of the mathematical concept being taught.

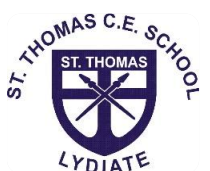
Impact

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study of the Mathematics National Curriculum.

By the end of Key Stage 1 our pupils will:

- Be confident with mental fluency of whole numbers, counting and place value. This involves working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools].
- Recognise, describe, draw, compare and sort different shapes and use the related vocabulary.
- Use a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.
- Know the number bonds to 20 and be precise in using
- and understanding place value.
- Read and spell mathematical vocabulary, at a level consistent with their

increasing word reading and spelling knowledge at key stage 1.



'Let your Light Shine' Matthew 5:16



By the end of KS2 our pupils will:

- Communicate their understanding of the number system and place value to include larger integers.
- Make connections between multiplication and division with fractions, decimals, percentages and ratio.
- Solve a wider range of problems, including increasingly complex properties of numbers and arithmetic
 - Record efficient written and mental methods of calculation.
 - Use the language of algebra as a means for solving a variety of problems.
 - Classify shapes with increasingly complex geometric properties and use the vocabulary they need to describe them.
 - Be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.
 - Read, spell and pronounce mathematical vocabulary correctly.