



# St. Thomas' CE Primary School Maths Policy

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At St Thomas' CE Primary School, we aim for every child to become a life-long learner with mathematics playing a central role. Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. Maths is a core subject in the National Curriculum. A high-quality mathematics education therefore 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.

## Aims

Our Maths curriculum follows the Programme of Study and Aims of the National Curriculum.

The National Curriculum for mathematics aims to ensure that all pupils:

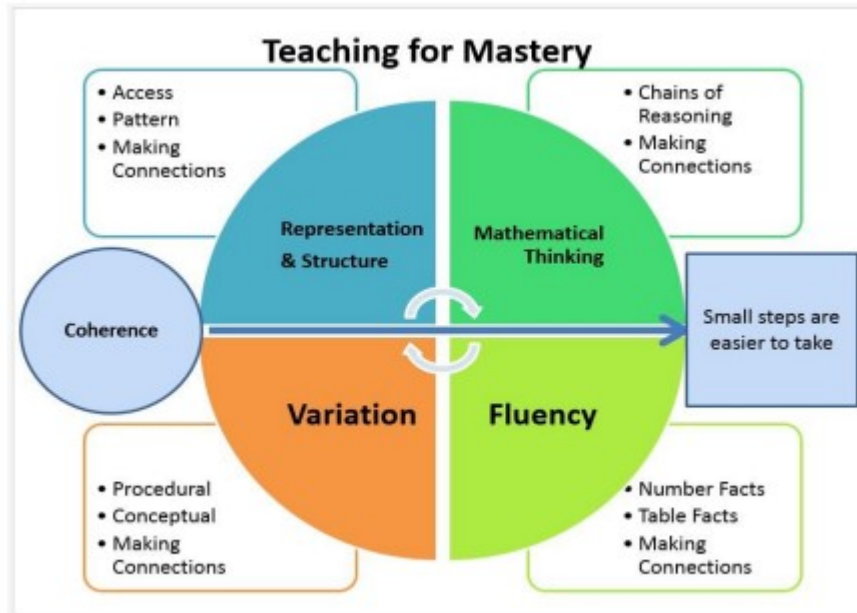
- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

## St Thomas' vision for Mathematics

- To promote a positive attitude towards Maths in all pupils.

- To develop a secure, deep understanding of mathematical concepts, not just procedures.
- To enable all pupils to find links between maths and other areas of the curriculum, including Science.
- To promote children into becoming resilient, independent thinkers who can apply maths in real-life contexts.
- To ensure all pupils progress in maths and are challenged appropriately through an in-depth understanding.
- To use a wide range of concrete, pictorial and abstract representations to develop all pupils' relational understanding of Maths.
- To ensure all pupils are confident using mathematical vocabulary when reasoning about Maths.
- To promote a growth mindset in all pupils, particularly when Problem Solving.

**Learning & Teaching of Maths - a 'Mastery' Approach**



Mastering maths means pupils of all ages acquiring a deep, long-term, secure and adaptable understanding of the subject. Achieving mastery means acquiring a solid enough understanding of the maths that's been taught to enable pupils to move on to more advanced material.

**Principles of Mastery Maths**

- All pupils learn the same mathematical content together, there is no acceleration onto new content.
- Individual needs are met through targeted scaffolding, effective questioning, and rapid, focused intervention to ensure appropriate support and challenge.
- Factual (e.g. numberbonds), procedural (e.g. written methods), and conceptual knowledge (e.g. place value) are taught in an integrated way, with each seen as essential to secure mathematical understanding.
- Teachers emphasise the reasoning behind methods, exploring how answers are reached, why strategies work, and which approaches are most efficient.
- Precise mathematical language is modelled consistently, with pupils expected to communicate using full, accurate sentences.
- Conceptual and procedural variation are used to present ideas in ways that deepen and sustain understanding.
- Key concepts are revisited and explored in depth, with sufficient time allocated to ensure learning is secure before moving on.

**Approach**

At Thomas' we follow a whole class, small-steps approach, children move through the curriculum at the same pace. Ensuring children have a secure understanding of fundamentals allows them to establish a firm foundation to build their knowledge on. Using a pictorial to abstract approach means children can make connections in maths and understand the variety of representations. The maths curriculum is designed so pupils regularly revisit prior knowledge, concepts, and procedures. These planned returns help secure learning in long-term memory, allowing pupils to work more independently and apply what they know to increasingly complex mathematical ideas.

Those pupils who are working behind age-related expectations are supported with additional adult support and targeted questioning. Children who grasp new ideas quickly are extended through tasks that deepen their understanding and require them to apply concepts in more complex ways. We use Oak National Academy as a foundation to base our lessons on. The scheme provides a coherent starting point for progression in mathematics, which we enhance and tailor to meet the individual needs of each class. Key Stage 1 & 2 also takes part in daily Mastering Number sessions, while Year 5/6 strengthens arithmetic skills through weekly lessons and assessments.

Lessons typically begin with a short retrieval task, followed by Task A, a brief teacher input to address key ideas or misconceptions, and then Task B to deepen or apply learning. This structure allows for discussion, reasoning, and collaborative exploration before pupils consolidate their understanding through independent practice. Across the sequence, activities are designed to secure fluency while continually developing reasoning.

Teachers plan mathematics using professional judgement informed by daily formative assessment and pupil feedback. They decide how long to spend on each objective based on pupils' understanding. Feedback is given verbally, through marking, and through peer and self-assessment, and this directly shapes the next lesson. Mathematical thinking is reinforced across the curriculum where appropriate, and pupils are encouraged to practise key number facts at home, supported by Times Tables Rock Stars.

### What is Fluency?

Fluency is built through deep understanding and regular practice. Alongside the daily maths lesson, pupils take part in short mental-maths sessions to strengthen this foundation. Fluency includes secure conceptual understanding, accuracy, rapid recall, and the ability to retain and apply knowledge over time.

- **Accuracy** — completing calculations carefully with minimal errors.
- **Pace** — recalling strategies quickly and working through questions at an age-appropriate speed.
- **Retention** — remembering and using knowledge confidently long after it is first taught.

Fluency develops when pupils make strong connections in their learning and have repeated opportunities to practise at the right time. In addition to a daily 60-minute Maths lesson, all children also take part in a daily 10-minute Mastery Number sessions to develop their fluency.

### What is Reasoning?

Reasoning shows that pupils truly understand mathematics. Talk is central to mastery, as pupils learn to explain, justify, and describe their thinking. Teachers support this through stem sentences and structured discussion so pupils can articulate not just the answer, but how they know it is correct. This builds mathematical language, confidence, and clarity before pupils record their ideas in writing.

Teachers maintain high expectations for accurate mathematical vocabulary, encouraging pupils to use it verbally and in written reflections. Key language is displayed to support independence. Regular opportunities for purposeful mathematical talk are built into lessons through prompts such as: *Show me how you solved it*, *Teach it to a partner*, *Why did you choose that method?*, *How else could you represent this?*, *True or false?*, and *Odd one out*.

### What is Problem Solving?

Problem solving sits at the centre of the mastery approach. Pupils learn to identify the mathematics within a problem, make connections between ideas, and apply what they know to new and unfamiliar situations. They explore concepts through varied representations and contexts, combining different skills to tackle increasingly complex tasks and real-life scenarios. Effective problem solving requires pupils to choose appropriate strategies, justify their decisions, and adapt their thinking as they work.

A structured approach such as RUCSAC can support this process: read the problem, understand what it is asking, choose the method or facts needed, solve using jottings where helpful, give the answer, and check that it fully addresses the question.

### Lesson Structure

All mathematics lessons follow the following structure:

- A 10-minute 'pre-teach' where possible for a small number of children who are considered to require a confidence boost.
- Flashback 4 - to promote fluency of arithmetic and revisit prior learning
- Introduce new learning through the mastery approach in **Task A**, followed by a brief teaching input to address key ideas or misconceptions, before moving on to **Task B** to extend and deepen thinking.

- 'Hot Marking' (marking WITH the children DURING the lesson) occurs regularly. A pupil should leave each lesson feeling successful and any misconceptions or concerns to be addressed immediately

### Planning

Within EYFS, staff plan lessons around 'The Big Ideas' in Mathematics linked to Composition, Counting and Cardinality, Pattern, Shape and Measures, all are linked to the Developmental Bands within the EYFS Curriculum. All children have Math's input daily, whole class and small group sessions. They also extend their knowledge and understanding through carefully structured activities which are provided within the continuous provision. Teachers in Reception to Year 6 use the Oak National Academy scheme of work as an aid to support their planning and delivery of Maths. Oak National Academy provides the yearly overview and Medium Term planning for each year group. Teachers develop their own Short Term Planning which incorporates: precision teaching, modeling, use of manipulatives/resources to scaffold learning, addressing misconceptions and the use of targeted key questions.

A strong emphasis is placed on number across the school. Significant time is dedicated to developing number fluency and securing core foundations before introducing more complex ideas. Number skills are revisited throughout the curriculum to build depth and confidence. Planning aims for all pupils to master age-related expectations through rich, challenging activities, ensuring essential objectives are prioritised and fully covered.

### Assessment

Formative Assessment - Is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. It involves identifying each child's progress in each aspect of the subject, determining what each child has learned and what should be the next step in his or her learning. This is mostly carried out informally by teachers in the course of their teaching.

Summative Assessment - This includes NFER assessments to check progress and identify gaps in knowledge and understanding (Arithmetic and Reasoning and Problem Solving Paper) for each year group from 1-5. Year 6 complete Practice SATs Papers each on a termly basis.

The NFER Assessment results are recorded each term. In line with the KS1 (non-compulsory) and KS2 SATs a scaled score of 100 would indicate 'Expected' and 110 or higher would indicate 'Greater Depth'.

### Homework

There are many ways in which parents can support their children in this journey. Research shows the critical importance of helping children to develop a positive mindset towards Maths.

Homework is used to support Mathematics through weekly tasks such as:

- Daily timestable practise via TTRS (Timestable Rockstars)
- Consolidation of objectives covered in class.
- 1-minute White Rose App (App or Desktop)

### Cross-Curricular Links

Maths is a core subject within the National Curriculum. As such, Maths is not just taught in a single Maths lesson; opportunities to extend children's learning through the wider curriculum are consistently planned for and maximised. At St Thomas' we strive to help children see and apply Maths in as wide a variety of contexts as possible. Cross Curricular opportunities for Maths learning include data handling in Science, coordinate work in Geography, measuring in DT and shape in Art.