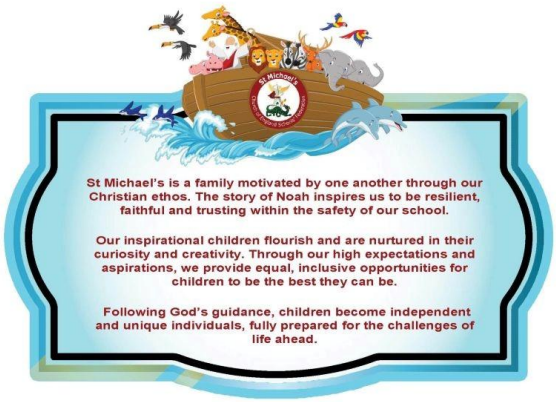
St Michael's Church of England Schools' Federation

Mathematics Policy



Key Details

Mathematics Subject Leader: Caroline Streeter

Named Governor with lead responsibility: Phil Lawrence

Date written: January 2026

Date of next review: January 2027

This policy will be reviewed **at least** annually. It will also be revised following any updates to national and local guidance or procedures.

Intent:

At St. Michael's Junior School, our overall aim is to equip all of our pupils with the life skills they need to be able to flourish in the real world and promote a love of maths. We aim to ensure that, regardless of background and ability, every pupil has a rich and meaningful mathematics education. Both staff and pupils understand the importance of automaticity and fluency within maths and this is taught through real life contexts to enable pupils to apply their understanding, reason about maths, problem solve and make connections across the subject and the wider curriculum. We believe in a language rich environment and our pupils will leave us with the confidence to talk maths, do maths and apply maths to their everyday lives.

The aims of the National Curriculum are to develop fluency and the ability to reason mathematically and solve problems:

Fluency:	**Reasoning:**	**Problem Solving:**
Quick and efficient recall of facts.	Following a line of enquiry.	Applying mathematics to a variety of routine and non - routine problems with increasing sophistication.
Quick and efficient recall of procedures.	Conjecturing relationships and generalisations.	Breaking down problems into a series of simpler steps.
Flexibility to move between different contexts and representations of mathematics.	Developing an argument, justification or proof using mathematical language.	Persevering in seeking solutions.

Implementation:

Our Curriculum:

Our maths curriculum is based on White Rose which is a whole-class mastery programme designed to spark **curiosity**, excitement and help children develop confidence in maths. As a school, we are confident and feel empowered to deliver the maths curriculum, and have the resources and support we need to achieve this. We use the White Rose programme as our long- term plan for each year group. Teaching sequences are based on small steps to ensure a good level of coherence, understanding, application of understanding and transference of skills to a range of mathematic problems and contexts. These small steps allow the children to fully immerse themselves in their conceptual understanding of maths skills. We give the children time to build their conceptual understanding through the use and exploration of maths manipulatives. We can also differentiate learning in this way by choosing particular resources to suit the specific needs of the children which enables all children to access the curriculum and to succeed.

White Rose maps out a long term plan based on 12 weeks in a term. Each year group begins the academic year with the topic Place Value which is foundation of all mathematical understanding. Children will then move through the topics systematically, building on prior knowledge. Teachers use **creativity** to design their lessons in order to provide the children

with concrete, pictorial and abstract (CPA) learning opportunities. Our use of CPA approach to our mastery curriculum underpins everything that we do. We believe that through the use of concrete manipulatives, all children will achieve and strengthen their conceptual understanding of maths. Through this, we enable children to explore number and become confident with manipulating them. This, we have found, fuels pupils' mathematical **curiosity** and **independence**. They also no longer see maths as a chore, as such, but a subject of possibility and exploration.

Across the Federation, Children are taught in mixed ability groups within their year groups. All children are exposed to their year group objectives and are offered the same opportunities. Pupils are given tasks to both support, enrich and stretch their learning. Challenging our greater depth pupils is a priority and seen through their breadth of mathematical concepts. Those who may need extra support are supported through scaffolding such as using mathematical manipulatives, visual prompts or by teacher/TA support. Each classroom has a clearly defined working wall which displays current learning. It is used by the children as a tool to assist them in their learning journeys.
Each class has one main maths session, four days of the week (Monday-Thursday).
At the Infant School, our main session lasts 45 minutes and includes one or more small step from White Rose, appropriate independent work and non-negotiables such as counting aloud forward and backwards. Children will also take part in a Flashback 4 activity. This is usually teacher led and oral or practical. Infant pupils have access to Numbots in school and at home for number fluency.
At the Junior School, Our maths focus lasts 60 minutes and includes times table practice, Flashback 4 and the main session which focusses on one or more small steps from White Rose. We use a number of strategies to embed multiplication facts such as precision teaching (probes) and the use of Times Table Rockstars. It is vital that the times tables are taught discreetly in Years 2-4.

<u>Mastering Number @KS1 and KS2:</u>
Both schools are part of the NCETM's Mastering Number programmes. These programmes run separately to the main session in a different time slot and last ten minutes each. Sessions run daily, Monday – Thursday. Children's progress is assessed by the class teacher.

The aims of the programme at KS1 are to develop children's fluency and flexibility with numbers, securing firm foundations in good number sense. This includes developing skills like subitising (instantly recognising quantities), understanding number composition and decomposition, comparing quantities and recognising relationships between numbers. Year 3 participate in this programme using the Year 3 planning provided by the NCETM. Year 4 and Year 5 follow their own Mastering Number @KS2 programmes.

The aims of mastering number at KS2 are to develop fluency in multiplication and division facts, and to build a strong, flexible number sense for Year 4 and Year 5 pupils. This is achieved through short, focused sessions that deepen understanding of place value,

addition and subtraction, and multiplicative relationships, ultimately providing a foundation for secondary school and all later mathematics.
Year 6, who are the only year group not encompassed in the programmes, spend 10 minutes daily (Monday-Thursday) completing 'quick maths.' This session allows them 10 minutes fluency practice time. Work is completed separately to the maths book and purple penned as a class. Year 6 have separate arithmetic and reasoning sessions to embed test technique.

Planning:

- Teachers plan using the 'Maths Progression' document and the White Rose Scheme of Learning.
- Mastering Number's planning and resources are provided by the NCETM.
- Weekly planning is completed to ensure learning is catered to their class' needs.
- A sequential outline of the week is completed in weekly planning which adheres to the White Rose scheme of learning. Teachers have the autonomy to repeat small steps as necessary to ensure that skills are embedded sufficiently. Small steps are not designed as individual lessons. More than one may be incorporated in a maths lesson.
- The needs of all pupils are to be considered carefully during planning.
- Adaption in the form of varying questioning, contexts and the use of CPA to be used for children with specific learning needs, SEND, or to address specific misconceptions.
- Children who need additional support or gap fills are supported using the 'Ready to Progress' document. Support can be a part of quality first teaching or additional adult led work away from the classroom.
- EYFS follow White Rose and Mastering Number @KS1.

Teaching approaches and organisation of learning:

- Both schools use a mastery approach to the curriculum. As of September 2025, both schools have reached the sustaining year of the NCETM's Teaching for Mastery programme.
- 'Ping pong,' and 'teach, do,' structure in all maths lessons.
- Use of visual representations to expose the mathematics.
- Children are exposed to a range of different question styles and contexts (fluency, problem solving and reasoning). The Maths progression document, along with the WR scheme of learning to be adhered to ensure coverage of skills.
- Children have the opportunity to share their work with members of the class and the wider school community, including parents attending open afternoons and our annual 'Maths Morning'.
- Learning intentions are shared with the children in the language of LO (Learning Objective) at the Infant School and LJ (Learning Journey) at the Junior School at the

start of lessons and are written on children's work. All success criteria relate to this as necessary. LJs are displayed clearly on working walls.

- Teachers use the CPA approach to teach and embed mathematical skills.
- Teaching can be adapted via the type of manipulative used. For example, lower attainers may use Base 10 and higher attainers may use place value counters. The reason being that one is more visually representative than the other.
- Teaching will encompass a range of strategies such as modelled questions, guided practice, intelligent practice, free exploration, partner talk and peer assessment.
- Teachers will model how to answer questions with specific mathematical vocabulary.
- Teachers will use stem sentences to embed mathematical vocabulary when discussing mathematical concepts.
- Children with specific learning needs will be supported through a variety of strategy and inclusive intervention. At the Junior School, Morning Move intervention activities ensure additional support in areas of specific need in Mathematics.
- Numbots subscription for Infants and Times Table Rock Stars for Juniors. These can be used for practice in school as well as at home. Logins are in reading records.
- Teachers will use demonstrate high presentation standards as mathematicians. They will model how to write 1 digit in each square for work books and support those who need it to do so.
- At the Junior School, pupils will use purple pens to make corrections and address their own misconceptions when working independently or with a partner. At the Infants, pupils will make corrections with a pencil.

Maths Books and Folders:

- Daily number work is completed in children's maths books where appropriate. Practical activities may be recorded with an 'I worked practically today' sticker. Photos that show clear learning to be taken.
- Children may work on new skills on table tops or whiteboards to provide a 'safe' and erasable space.
- Children use a red pen when reasoning and problem solving and a purple pen for RTM and corrections.
- Year 3 should implement a staged introduction of the use of a red and purple pen in the maths books. Years 4-6 to be embedded.
- Infant School children complete work practically and on paper which is then stored in a folder for each child.

Assessment:

- End of block assessments to taken by all pupils at the end of each block. Children with specific needs may have questions read to them. Children may use manipulatives for end of block assessments. Class teachers mark and input into a gap analysis document for planning purposes.

- End of term assessment to be taken by all pupils at the Junior School. Two papers to be taken - arithmetic and reasoning. Class teachers mark and input into a gap analysis document for planning purposes.
- Pre block assessment of previous year group's objectives to be taken before each block. Gap analysis carried out.
- Ongoing AfL throughout the lesson. Daily active marking where possible.

Classroom Environment:

We use working walls to display children's sequence of learning in the classroom. Demonstrations of skills (including examples of CPA), unit vocabulary, previous learning (where appropriate) and pupil voice to be displayed on working walls as a resource for children to refer to when working independently. Teachers have the autonomy to decide whether they present the sequence of learning by topic or on a weekly basis. At the Junior School, teachers use the labels: *before, first, next, then, after that* and *finally* to label individual lessons. Additionally, lessons should be dated. Each example will have an LJ attached. Working walls include problem solving and reasoning where appropriate. Visuals on working walls correspond to the scheme of learning. For example, number blocks are displayed on our Infant working walls.

Times Tables Check:

In June of each academic year, Year 4 take part in the statutory MTC (Multiplication Tables Check). As set out in the progression document and White Rose scheme of learning, children are taught multiplication table facts up to 12 x 12 in Years 2-4. Children practise the rapid recall of these facts daily in each year group. This can be done orally or hand written, in a group setting or completed independently and is at the discretion of the teacher.

Times tables are the responsibility of all teachers. Practice is embedded subtly in daily teaching as well as taught discreetly in Years 2-4. TTs are also a part of the weekly rotation of challenges during Morning Move activities (Juniors only).

In the Spring term, Year 4 will prepare for the MTC which is administered by the Maths Lead on school Ipads. To enhance pupils' rapid recall, children practise both in home and at school using Times Table Rockstars. Every pupil has a log in and can both learn and practise their recall of multiplication facts in a fun and competitive way.

Impact:

Teachers active mark through the lesson where possible to provide immediate feedback and intervention where needed. Mini plenaries are used effectively to address common misconceptions identified by active marking. Misconceptions are addressed through 1:1 feedback, immediate intervention and RTM (response to marking). They will also be addressed in subsequent lessons. Individual lesson's LJ will be ticked when the objective

has been met and achieved. At the beginning of each topic, the children will complete a pre-block assessment of the previous year group's assessment. Teachers then complete a gap analysis and plan to fill evident gaps where necessary. This may be incorporated into the main maths session, guided reasoning or individual interventions. Children will also complete an end of block assessment at the end of each unit and an end of term assessment three times a year.

Since we implemented our mastery approach to the mathematics curriculum in 2017, we have seen yearly improvements in our KS2 results. In our classrooms, you will find classes that are enthused, engaged, **challenged** and on task. Children are happy and excited to begin their maths lessons!

When observing our pupils, you will hear them talking enthusiastically about their maths and speak about how they love the subject. You will hear them celebrating their mistakes and learning from each and every one they make. You will see a growth mind-set where they are not afraid to jump into the learning pit and struggle to get out – as they know that this is how they learn and make new neurological pathways. We celebrate perseverance and the resilience to learning that it brings. Pupil voice is very important to us and is specifically taken into account during monitoring carried by the Maths Lead each term. Our classes are enthused, engaged, challenged and on task. Not only will you see independence and pupils supporting their peers by discussing and tasks to one another but you will witness closeknit teams, togetherness, and pupils loving learning. Get ready to see pupils ready to use and apply their maths in their everyday lives!