

## Maths Policy 2026

‘With Jesus we can achieve what we dream and believe’

### Overview

At St. Michael's, our Explore Curriculum is built around the National Curriculum and contributes to our school philosophy of teaching and learning as expressed through our mission statement.

The National Curriculum states that: “Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. 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.”

### Key Attributes for our Mathematicians:

- Our Mathematics lessons reflect a CPA approach: Concrete (the use of hands-on manipulatives), Pictorial (representing Mathematical concepts through images and diagrams), Abstract (fluency in number).
- Curiosity to investigate and make Mathematical statements with confidence.
- Reasoning and problem solving around Mathematics in every lesson and using high level vocabulary to be able to talk like a Mathematician.
- Daily retrieval practice so we know that our children are able to know more and remember more.
- Resilience to be able to take on a challenge and overcome mistakes to take exciting new steps in learning and exploring.
- The ability to make connections and apply Mathematical skills to all areas of the curriculum.

### Intent

**Maths is the foundation for understanding the world and we want our children to know the purpose behind their learning and to apply their knowledge to their everyday lives.**

At St. Michael's, we provide high-quality Mathematics through our **Explore Curriculum** that is challenging, **enjoyable** and **ambitious** for all of our learners and builds a schema to support and develop children's cognitive load. Underpinned by the National Curriculum, our Mathematics curriculum allows **progression** and **skill** for our children to have the opportunity to **go beyond the National Curriculum** in order to become fluent in number as well as being able to **conquer** Mathematical reasoning, with increasing articulacy and accuracy.

We encourage our children to take risks, **explore** Mathematics and make the connections needed to enjoy a greater depth of learning and secure their understanding. Our inclusive Mathematics curriculum is **sequenced** in an effective way, is **adaptive** and provides challenge for all children from EYFS to Year 6.

Our curriculum aims to develop mathematical competencies and to have our children understand the power of Mathematics and how it can be applied across the curriculum. By the time our children reach the end of their Primary Mathematics journey, we endeavour for them to be able to use mathematics in different contexts, **talk like a Mathematician** by using the vocabulary they have obtained through explicit teaching and retrieval practice and have a mathematically curious mind.

### Implementation

#### **Our Mathematics Lesson Structure**

There are four main components to our lessons at St. Michael's. Each part is crucial to our learners' Mathematical understanding and progression throughout each lesson. These components are: Retrieve and Reason, I do We Do, You Do and Review. Our 4-part lesson shows consistency across our school and provides our children with a familiar structure to aid their learning.

1. **Retrieve & Reason** – this is a crucial part of teaching at our school and allows children to recall and use what they have learned in previous lessons, topics, terms and year groups; **learn more and remember more**. Retrieval helps to embed learning into the long term memory. We then work through a word problem so all of our children are challenged in their mathematical abilities and have the chance to **talk like a Mathematician** at the beginning of a lesson.
2. **I Do, We Do** – this is where the main teaching happens! Our teachers **model** and talk through what the children will achieve during the lessons and demonstrate strategies that help our children work independently. The children have the chance to **explore** their new learning through partner and whole class discussion during the 'We Do' part of our lesson. As the children begin to gain an understanding of their objective, they can choose to go on to work independently.
3. **You do** – the children get a chance to use what they have learned and put it into practice. This is an opportunity for our children to use their skills and different support is offered by our staff where needed. Worked examples are visible for the children as they embed their new skill.
4. **Review** – the children will self-assess or self/peer mark their work so get a good understanding of their progress during the lesson. We also review by challenging the children with **reasoning** questions, having group discussions and writing themselves a 'top tip' to remember. This part of the lesson can also be an opportunity for the class teacher to address misconceptions or re-teach a concept if needed. The 'Review' part of the lesson is all based around what the children need and can change on a lesson-by-lesson basis.

### Impact

The impact of our curriculum will show through assessment. Before each new topic, we complete pre-topic assessment tasks that inform the planning and teaching of the unit of work. They provide an evidence base for what our children have retained and are able to process before new learning is applied.

We 'live mark' as a form of formative assessment throughout lessons, which allows staff to support learners, address misconceptions, adapt and challenge where needed. This knowledge then impacts daily planning of Mathematics lessons to support and develop specific areas.

Summative assessment is used at the end of each term. Years 2 and 6 will complete their year group specific test papers and years 1 (Spring and Summer) 3, 4 and 5 complete NFER tests. We then adopt a diagnostic approach to assessment and complete question level analysis; knowing where a child is and where they need to get to is at the heart of all of our teachers' planning and is vital in ensuring children leave St. Michael's as confident, fluent and life-long mathematicians.

### **Aims & Objectives:**

Using the Programmes of Study from the National Curriculum the aims of mathematics are:

- To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion
- To create a lively, exciting and stimulating environment in which all children can learn Maths
- Ensure the delivery of Maths is filled with cross curricular opportunities
- To promote confidence and competence with numbers and the number system and to use mathematical vocabulary to reason and explain.
- To develop the ability to solve problems through decision making and reasoning in a range of contexts
- To develop a practical understanding of the ways in which information is gathered and presented.
- To explore features of shape and space and develop measuring skills in a range of contexts
- For children to challenge and stretch themselves and take risks in their learning
- To promote the concept that acquiring mathematical knowledge and skills provides the foundation for understanding Maths in everyday life.

### **Framework.**

The National Curriculum Program of study is taught in organised blocks using the White Rose Revised Planning. ( Y 1-6) These units also link and build upon the framework or units outlined in the Ready To Progress Criteria. (2020) This ensures previous knowledge is built upon in a systematic way. Specific class based teaching uses a variety of resources rather than one particular scheme. This allows the teacher and adults working with the children to tailor and select resources which match their prior knowledge.

Each unit or block of work will include aspects from the following model. There is no set starting point, some topics may be best building upon solid skills, where as at other times it is more beneficial to introduce reasoning. EYFS use the NCETM programme (National centre of Excellence of the Teaching of Mathematics ) to improve maths pedagogy, deepen pupil understanding, and reduce teacher planning time. It helps teachers move away from rote learning toward

conceptual understanding, offering structured, small-step curriculum materials that foster confidence and fluency.

### **Strategies**

It is important that children are allowed to explore Maths and present their findings not only in a written form but also visually; to that end the school will adopt the CPA approach: concrete, pictorial, abstract. This will allow the children to experience the physical aspects of Maths before finding a way to present their findings and understandings in a visual form before relying on the abstract numbers.

At St. Michael's we follow the White Rose Calculation Policy (See Appendix 1) We also use White Rose Maths plans as an aid to our planning. EYFS use the NCETM planning. (see Appendix 2)

Mathematical vocabulary and materials should be displayed so that children use these in the communication of their understanding. There should be maths work on display in classrooms and in other areas of the school in order to encourage a positive attitude and enthusiasm towards mathematics for all groups of children as well as developing independence within lessons.

#### **Progression of Manipulatives and Visuals**

The following table outlines the suggested progression of key resources to support learning across the school.

| Stage              | Focus Concepts                                                 | Concrete Manipulatives                                                      | Pictorial Representations                                                       |
|--------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| <b>EYFS</b>        | Number sense, counting to 10, subitising                       | Real-life objects (shells, pebbles), Numicon, Five/Ten-frames, Bead strings | Pictures of objects, dot patterns, tally marks                                  |
| <b>KS1 (Y1-2)</b>  | Addition/subtraction within 100, basic multiplication/division | Base 10 (Dienes), Rekenreks, Two-sided counters, Place value mats           | Part-whole models, Bar models, Number lines, Array drawings                     |
| <b>LKS2 (Y3-4)</b> | 3 & 4-digit numbers, column methods, fractions                 | Place value counters, Cuisenaire rods, Fraction tiles/walls                 | Formal column layout visuals, Grid method diagrams, Fraction bars               |
| <b>UKS2 (Y5-6)</b> | Larger numbers, decimals, percentages, algebra                 | Digital manipulatives, Protractors, Multilink cubes (for volume/ratio)      | Area models for long multiplication, Ratio tables, Pie charts, Coordinate grids |

### **Monitoring and Assessment:**

Teachers will work collaboratively within year groups to ensure coverage and clear progression. Within each year group they will work to plan and deliver lessons that suit the particular learning styles of the children within the year group. The White Rose and NCETM planning frameworks and accompanying resources are used as a spine. Teachers continuously assess the children informally (formative assessment) through their marking and interactions with the pupils during lessons.

On a daily basis pupils receive both verbal and written feedback as teachers 'live mark' within the lesson. This shows when they are ready to progress to the next aspect of their learning. At the end of each unit of work, children complete the end of unit assessment. This provides the teacher with

key information that can be addressed within subsequent lessons. This will inform their retrieval sessions in the following units.

Across a range of lessons children should be allowed to engage in mathematical discussion (talk partner or group work), investigations, problem solving, practical experiences and written methods, as well as allowing for time to demonstrate their understanding through gap tasks. In EYFS children's attainment and progress is tracked on a daily and weekly basis

NFER Testing: As part of our formative assessment year's 3, 4 & 5 conduct NFER test in the autumn term, as a baseline assessment, and then again in the summer term to identify progress and inform attainment standards.

### **Multiplication tables**

Times tables are taught through various aspects of maths lessons. They are taught as a main session and practised on a daily basis to aid retention. We also use Times Tables Rock Stars as a school-wide support for learning times tables. TTRS is an interactive online learning tool and is used to support the learning of multiplication in school and is accessible at home. Children are encouraged to access it at home to support their learning. We have invested in the Sumdog programme for year 5 to increase student engagement and improve mathematical fluency through personalized, game-based learning. It adapts to each child's skill level, making it effective for bridging learning gaps, particularly for SEN and lower-attaining students

### **Special educational needs & disabilities (SEND)**

Our Mathematics lessons are inclusive to all children and we embrace **adaptive** teaching to ensure that all children are accessing learning. For example, our teachers will use time to pre-teach vocabulary or basic skills to children who need support so they are able to access the learning during a lesson. Our teachers will also adapt the levels of support given to children, whether that be through the use of manipulatives, digital support or adult support. While planning lesson, our teachers are aware of the individual needs of our learners and plan to adapt lessons suitably.

Where required, we incorporate suitable objectives from the National Curriculum to meet the needs of children and these are taken into consideration during planning. Targets are set for individual children and are worked upon during all maths lessons. Maths focused intervention groups help children with gaps in their learning and mathematical understanding and those children have the opportunity to benefit from small group, precision teaching sessions which are delivered to a high standard by trained staff. Teachers have a responsibility to provide support for children with SEND and to also provide activities that provide sufficient challenge for all children at all levels.

### **Equal Opportunities**

We strongly encourage a positive attitude towards Mathematics to ensure that all children, regardless of their gender, race, language or ability, have the opportunity to develop an enjoyment and confidence in Maths. Our aim is to ensure that all children know more and remember more, are

able to develop and progress in their learning. Teachers plan their lessons to be inclusive to all children and ensure a greater depth in learning. Our CPA (Concrete, Pictorial, Abstract) approach is **adaptive** to all learners, encourages ambition and meets our equality, diversity and aspirations themes across our school.

### **Parental Support and Homework**

We recognise that parents make a significant difference to the pupils' progress in maths and encourage this essential partnership.

Currently the school subscribes to Times Tables Rock Stars & Numbots online resources, Y5 Sumdog Programme. Children are provided with a username and password which can be accessed at home. From Y3 onwards weekly access at home to the resources is actively promoted as part of our homework policy. Children who do not have access to online learning are given further opportunities in school and supported with paper based resources upon request.

### **Monitoring of standards across the school**

In conjunction with the teaching and learning team, the maths lead will ensure that the standard of teaching and learning is consistently good across the school. This will be done using the following strategies:

- Robust and tailored CPD including staff meetings & external courses.
- Book sampling & monitoring.
- Lesson Drop in's and observations.
- Monitoring of Active & relevant to learning working walls.
- Monitoring marking and feedback books kept by teacher to ensure they are being used to inform planning, address misconceptions and guide challenge.

Maths Lead: Kelly Gibney

Date Approved by Governing Body:

Chair Governors: Jeanette Riley

Headteacher: Jade Gordon

Next Review Date:

### **Appendixes**

Appendix 1-White Rose Calculation Policy Link

<https://drive.google.com/drive/folders/1dLO4VZOyvimKGyB7dis8CmNSZ3e0IKmH>

Appendix 2-NCTEM Mastering number EYFS

<https://drive.google.com/drive/folders/1JzPB6tf-BBt-2pIS11NDseUuVLCPUHIL>