

# St Mary's Catholic Primary School

## Maths Policy



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**Staff responsible: Sam Ringwood**

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## Aims

At St Mary's, we promote and encourage the positive perception that all children are mathematicians; we aim to develop animated, enquiring individuals whilst encouraging pupils to become self-motivated and dynamic learners in order to solve problems that will become an integral part of their future. We aspire for our pupils to develop a confidence and capability in using and applying mathematical concepts and for our learners to carry with them a resilient and determined attitude in approaching increasingly complex challenges and problems, in a systematic and logical way. During their time at St Mary's, our children are encouraged to view Maths as a creative subject as we continuously provide diverse and varied opportunities for them to demonstrate and showcase their developing understanding. Our curriculum promotes enjoyment and enthusiasm for learning through a combination of practical investigation, debate and discussion and challenging conceptual ideas. Through their experiences of Maths at St Mary's, children begin to develop an appreciation of, and enjoyment in, the subject itself; as well as a realisation of its wider role in other curriculum areas.

The aims of this policy are to ensure: that there is parity and consistency in the planning, teaching, assessment and progression of Mathematics across the Key Stages and year groups of the school; that all staff and members of our school community are aware of expectations in order to deliver an effective, engaging and high-quality Maths curriculum; and that all St Mary's pupils are being provided with equal opportunity to make sustained progress in their Maths.

## Roles and Responsibilities

### 2.1 Subject Leader

Alongside additional teaching responsibilities, the Maths Subject Leader is responsible for:

- Supporting staff and the wider school community in promoting the ongoing development and profile of Maths within the school, including changes to curriculum or assessment
- Coordinating the implementation of the Maths curriculum across the school
- Monitoring the ongoing effectiveness and consistency of Maths planning, teaching and learning, both formally and informally, e.g. book scrutiny, planning scrutiny, lesson observations, pupil interviews, staff discussions and audit of resources
- Ensuring equal opportunities are provided for all children within the Maths curriculum (alongside SLT and SENCO)
- Providing staff CPD, through training on INSET days or staff meetings
- Liaising with the LA and Umbrella Trust accordingly
- Maintaining and raising standards in Maths across the school
- Undertaking relevant CPD to support in role as Subject Leader

- Providing high-quality, age-appropriate resources and manipulatives to support in implementing engaging curriculum, including auditing this as appropriate

## **2.2 Class Teachers**

Class teachers are responsible for:

- Planning and teaching high-quality, engaging lessons daily, based on the NC objectives, and effectively using the St Mary's planning format, that incorporate elements of: fluency, to practice skills; reasoning, to deepen understanding; and problem solving, to apply skills
- Identifying specific needs/requirements of all children, including EAL, PP and SEND, and engaging in discussion with Subject Lead or SENCO to develop more targeted support, if required, to ensure the needs of all children are met
- Ensuring curriculum coverage is focused on mastery and depth of enriched understanding
- Undertaking both formative and summative assessment, which then informs planning accordingly
- Creating interactive, purposeful classroom 'Working Walls' which reflect current learning (e.g. key vocabulary) and ensuring that class-based equipment is effective, appropriate and accessible
- Providing timely feedback to pupils, both written and verbal, in line with the Marking and Feedback Policy

## **2.3 Teaching Assistants & ISAs**

At St Mary's we recognise the invaluable resource that are our Support Staff; they are deployed to support with Maths at the direction of the class teacher, sometimes in a 1:1 setting or in a small group. Support staff are encouraged to use a range of recording methods beyond that of the exercise book, for example, use of photographic evidence and brief observation notes where appropriate.

## **2.4 Link Governor**

The Link Governor for Maths is responsible for:

- Monitoring the school's approach to the teaching of Maths to ensure education remains at a consistently high-quality standard
- Liaising with the Maths Lead to support with implementing the School Improvement Plan

## **2.5 Pupils**

Children are taught a variety of methods for recording their work, throughout their time at St Mary's, and are encouraged and supported to use the most appropriate, effective and efficient method. Children are encouraged to use mental strategies and their own jottings before resorting to more formal written methods for more complex problems. Children's own jottings to support their work are encouraged throughout all year groups. Our pupils are expected to respond to next steps

and present their work consistently neatly, in line with the Presentation Standards in the Marking and Feedback Policy.

## **Curriculum**

### **3.1 Curriculum Intent**

Through the study of mathematics, St. Mary's children will develop confidence and fluency in their understanding of concepts in order to reason and problem solve beyond the mathematics curriculum. They will become more prepared for the challenges presented in the world around them (for example in order to become financially literate).

At St Mary's, we recognise the vital importance that Maths plays in all areas of life. This revolves around our children acquiring sets of essential skills and concepts which are intrinsically linked to other curriculum areas and are vital in supporting ongoing development.

### **3.2 Foundation Stage**

The Programme of Study for the Foundation stage is set out in the EYFS Statutory Framework. Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shape, spaces and measures. Mathematics within the EYFS is developed through purposeful, play-based experiences which stems from both adult-led and child initiated learning. Over the course of the Foundation stage, pupils will be encouraged to record their mathematical thinking in a more formal way, where appropriate.

Reflecting proposed revisions to the Early Learning Goals (ELG), coming into effect in September 2021, there will be a greater focus and clarity in certain areas within the Mathematics ELGs. We will be continuing to strengthen the teaching of Early Numeracy in order to aim for all children to begin KS1 with a strong and confident foundation in Maths. Frequent, rich and varied opportunities will be provided for children to build and apply their understanding, including a more secure base of knowledge and understanding of the vocabulary upon which mastery of mathematics is built.

### **3.3 Key Stage 1 and 2**

The Programme of Study for Mathematics are set out year-by-year for Key Stage 1 and 2 in the National Curriculum (2014). Pupils will be provided with opportunities to make connections across varied mathematical concepts to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. By the end of each key stage, we aim for pupils to become fluent in the fundamentals of the objectives set out in the National Curriculum through varied and frequent practice which increases in complexity over time. Our children will also develop their conceptual understanding through following the CPA (concrete, pictorial, abstract) approach which is ingrained within the day-to-day teaching in every year group, starting with practical, "hands-on" Maths first and using this as a foundation for development; this approach increases ability to recall and apply knowledge both accurately and rapidly. Within every curriculum area covered, opportunities to reason mathematically are provided in order for our children to follow lines of enquiry, conjecture relationships and make generalisations from spotting numerical patterns. Mathematical language will consistently be developed, in line with the NC for each year group, and this will be utilised to justify, debate and prove increasingly complex problems.

At St Mary's the key focus of teaching Mathematics is to ensure that confidence and mental fluency are built up over time – this mastery approach ensures a deeper understanding so that future

learning is built upon a solid foundation. We encourage Maths to be visualized in varied ways which allows our children to begin to see connections in order to investigate topics.

### **3.4 Planning**

Following the National Curriculum objectives for each year group, this ensures that continuity and progression in the teaching of Mathematics is maintained throughout the school. Through reflective, reactive and progressive planning and preparation, teaching of Maths at St Mary's is guaranteed to provide opportunities for: practical activities which solidify and demonstrate understanding (using the CPA approach); problem solving in a variety of non-routine contexts; a balance of individual, paired, group and whole-class activities; and creative yet purposeful tasks which aim to encourage a logical and methodical approach.

At St Mary's, in addition to following the long-term guidance of the NC, we supplement this with a variety of additional teaching and learning resources to support in developing our children's fluency, reasoning and problem solving skills. Example resources used at St Mary's to support in developing mastery in mathematics include:

- White Rose Maths Hub
- Focus Maths
- NRICH
- Numicon Online
- St Mary's StaffShare drive

Weekly planning is mapped out from the Focus Maths and White Rose schemes, to ensure that coverage is comprehensive, consistent and sequential. These schemes provide exemplification of mastery for each curriculum objective, along with extensions for reasoning and problem solving activities. We use these to support the implementation of the CPA approach across all year groups and this supports in ensuring that curriculum depth is explored before breadth. Pushing for deeper understanding, proof and reasoning are all at the core of our Maths curriculum delivery. Through careful planning of 'small steps' which sequentially build on each other, children achieve strong arithmetical, reasoning and problem solving skills which they can apply across different areas of Maths and subjects.

Daily planning will always include appropriate Learning Objectives and Success Criteria which will be built upon specific mathematical vocabulary relevant to the current topic. These will drive lessons which will be made

### **3.5 Cross Curricular Links**

At St Mary's, throughout the whole curriculum, opportunities to extend and promote Mathematics are continuously sought and mathematic knowledge, skills and understanding are encouraged wherever possible. Nevertheless, the prime focus is upon ensuring that mathematical knowledge and understanding is delivered discretely and through quality first teaching and this is subsequently supplemented through wider curriculum areas.

## **Assessment**

### **4.1 Formative Assessment**

Formative assessment is constantly undertaken as this is a continuous, evolving process. In line with our Marking and Feedback Policy, our children's work, discussion, practical activity and questioning

is assessed continuously in order to identify and target possible misconceptions and in order to extend/challenge where appropriate. Any ongoing assessments are utilised in order to inform future planning and teaching; lessons are adapted readily and short term planning evaluated and edited in light of these assessment to ensure that misconceptions are not developed and to ensure that equal opportunity has been provided for all. These materials used alongside judgements made from class work support teachers in making accurate formative assessment of each child.

#### **4.2 Summative Assessment**

Regular and progressive summative assessment should be used to monitor progress within the different aspects of the mathematics curriculum thus enabling teachers to build a profile of development and skills. These materials are kept in pupil's Mathematics book and are recorded in order to inform teacher judgements when assessing formally. End of Unit and Half Termly assessments will be undertaken, along with supplementary assessments at the beginning of specific units, in order for our teachers to make accurate judgements on progress and attainment.

#### **4.3 Statutory Assessment**

We aim to provide our pupils at St Mary's with diverse and engaging opportunities to develop their mathematical understanding and this knowledge is assessed in the form of the KS1 and KS2 SATs assessments. These formal assessments are completed at the end of Year 2 and Year 6, respectively, and will assess each pupils understanding of the curriculum areas covered across the two key stages. These SATs papers are comprised of both arithmetic and reasoning-style questions to assess the full depth of mathematical understanding.

In addition to the SATs papers, Year 4 will have a statutory times-table check towards the end of the year which will assess multiplication and division knowledge up to  $12 \times 12$ .

This is covered in full in the Assessment Policy.

## **Links to Other Policy Documents**

Maths - Progression in Calculation Policy

Marking and Feedback Policy

SEN Policy

Staff Handbook

## **Declaration**

Maths Policy to be reviewed annually from September 2021.

Sam Ringwood

Mathematics Leader, September 2021