ST. MARY & ST. MARGARET'S
CE (AIDED) PRIMARY SCHOOL

MATHEMATICS POLICY

February 2025

School Values
Our School Values set the ethos in which this policy is grounded:

We believe that St Mary and St Margaret's CE Primary School exists to enable every child to realise his or her potential to the fullest possible extent, whatever his or her particular needs and abilities. We aim to help all children to be the best they can be by 'living life in all its fullness' (John 10:10).

To this end, we promote our agreed School Values:

- *Growing as a child of God*
- *Loving learning*
- *Caring*
- *Achieving*
- *Personal development*

Contents

1. Introduction

This policy outlines the teaching, organisation and management of the mathematics taught and learnt at St Mary and St Margaret's Primary School.
The school's policy for mathematics is based on the Primary National Curriculum 2014. The policy has been drawn up as a result of staff discussion and has the full agreement of the Governing Body. The implementation of this policy is the responsibility of all the teaching staff.

Maths Vision
At St Mary and St Margaret's we believe maths is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. Our high-quality mathematics education therefore aims to provide 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.

2. Aims and Principles

At St Mary and St Margaret's our aim is that every child should be able to reason and solve problems mathematically by using the appropriate skills, concepts and knowledge. They should be provided with rich and enjoyable experiences related both to their individual needs and to the wider requirements of society. These aims link closely with those 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.

In addition, at St Mary and St Margaret's we aim for each child to:
1. Have a positive attitude towards mathematics.
2. Have self-confidence in their ability to deal with mathematics.
3. Be able to work systematically, co-operatively and with perseverance.
4. Be able to think logically and independently.
5. Experience a sense of achievement regardless of age or ability.
6. Understand the appropriate underlying skills, concepts and knowledge of number, measurement, shape, space and handling data.
7. Be able to apply previously acquired concepts, skills, knowledge and understanding to new situations both in and out of school.
8. Understand and appreciate pattern and relationship in mathematics.
9. Be able to communicate with peers and adults, ideas, experiences and questions, clearly and fluently, using the appropriate mathematical language.
10. Be able to explore problems using the appropriate strategies, predictions and deductions.
11. Have equality of opportunity regardless of race, gender or ability.
12. Be aware of the uses of mathematics beyond the classroom.
13. Become proficient in the use of mental calculations and develop efficient strategies to work out the answers.

We aim for parents to:
1. Be actively involved in their children's mathematical learning both in school and at home.
2. Understand and support the school's mathematics policy and scheme of work.

Principles
1. To develop fluent and confident mathematicians who can reason and problem solve.
2. To use concrete resources, models and images to allow children to develop a deep understanding of mathematical concepts.
3. To create an environment in which children enjoy maths, discover their own patterns and relationships and are unafraid of making mistakes.
4. To support and intervene appropriately when children come across difficulties in maths.
5. To stretch and challenge all children regardless of ability.

3. Teaching Mathematics

Curriculum

At St Mary and St Margaret's, we want our children to be able to 'see the big picture' – linking and building upon previous learning so there is a firm foundation to new learning. Furthermore, we want children to have time to develop a deep understanding of the concepts covered and therefore our curriculum is organised into blocks of work around a particular concept or concepts. In order to ensure children revisit concepts regularly, they will take part in daily maths recap sessions which we call 'Early Bird Maths'. As a school we will follow the Concrete, Pictorial, Abstract (CPA) approach to teaching new concepts again to encourage a deep understanding of them.

Teaching time

To provide adequate time for developing mathematical skills each class teacher will usually provide a series of progressive mathematics lessons throughout the week. These lessons may vary in length but will usually last for about 45 minutes in Key Stage 1 (sometimes clustered together and taught in blocks) and 50 to 60 minutes in Key Stage 2. Links will also be made to mathematics within other subjects so pupils can develop and apply their mathematical skills.

Planning

Long term and medium-term planning is structured following guidance set out in the White Rose Scheme.

Short term plans are completed weekly by teachers and detail the objectives and activities the children will be completing in maths that week. These will be adapted to meet the needs of the class. Teachers can use the agreed planning format (see appendix 1) or can save white board files and/or PowerPoints and resources in a folder that can be added to the work drive.

Approach to calculation

The National Curriculum (2014) provides a clear progression of written methods for calculation. At St Mary & St Margaret's we follow this guidance and use the CPA approach with a range of resources to support it such as: Dienes, Numicon or place value counters. We are also guided by our scheme of work provided by 'White Rose Maths'.

Calculators are used throughout KS1 &2 where appropriate.

Class Organisation

From Year 1, all pupils will usually have a dedicated mathematics lesson. Within these lessons there will be a good balance between whole-class work, group teaching and collaborative or independent activities. All lessons will have learning objectives which clearly state what the children are going to be learning during the lesson and may also have a series of success criteria (known as steps for success) that give the children the steps that they need to follow in order to achieve the learning objective.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies – for example, in some lessons this is achieved through differentiated group work and in other lessons by organising the children to work in pairs on open-ended problems or games. We use classroom assistants to support targeted groups and to provide in situ feedback to ensure that work is matched to the needs of individuals.

At St Mary and St Margaret's we do this through careful planning and preparation, ensuring that throughout the school:

- Children are given opportunities for practical activities, role play and mathematical board games.
- We develop children's mental and oral strategies with an emphasis on speed recall of number bonds and multiplication tables.
- We develop mathematical vocabulary.
- We encourage problem solving.
- We facilitate individual, group and whole class discussions and activities.
- We provide open and closed tasks.
- We encourage a range of methods of calculating e.g. mental, pencil and paper and using a calculator.
- We understand mathematics through a process of enquiry and experiment.

Equal Opportunities

At St Mary and St Margaret's as a staff we endeavour to maintain an awareness of, and to provide for equal opportunities for all our children in mathematics. We aim to take into account cultural background, gender and special needs, both in our teaching attitudes and in the published materials we use with our children.

More Able Learners

More able learners will be identified as part of our formative and summative assessment procedures. We will provide for their needs through a framework of quality first teaching which focuses on ensuring the children are challenged appropriately. When working with the whole class, teachers will use effective questioning to challenge & motivate all pupils, including those of higher mathematical ability. In addition, we will focus on developing their learning behaviours, including greater reflection, problem solving and enquiry, making connections, higher order thinking skills and independent learning. Special arrangements may be made for an exceptionally gifted pupil e.g. they may be taught within a small group or may follow an individualised programme with more challenging problems to tackle.

Pupils with special educational needs and individual education plans

Teachers will aim to include all pupils fully in their daily mathematics lessons. All children benefit from the emphasis on oral and mental work and participating in watching and listening to other children demonstrating and explaining their methods. When planning, teachers will try to address the child's needs through simplified or modified tasks or the use of support staff. However, a pupil whose difficulties are severe or complex may need to be supported with an individualised programme in the main part of the lesson either by a teacher or an LSA.

How we work in the Foundation Stage

At St Mary & St Margaret's we follow the EYFS framework (2020). Within this framework there are four guiding principles which shape our practice.

These are:

Every child is a unique child, who is constantly learning and can be resilient, capable, confident, and self-assured.
Children learn to be strong and independent through positive relationships.
Children learn and develop well in enabling environments with teaching and support from adults, who respond to their individual interests and needs and help them to build their learning over time. Children benefit from a strong partnership between practitioners and parents and/or carers.
Children develop and learn at different rates. The framework covers the education and care of all children in early years provision, including children with special educational needs and disabilities (SEND).

As part of our practice we:

Provide a balanced curriculum, based on the EYFS, across the seven curriculum areas, using play as the vehicle for learning;

Promote equality of opportunity and anti-discriminatory practice.
We provide early intervention for those children who require additional support;
Work in partnership with parents and carers;
Plan challenging learning experiences, based on the individual child, informed by observation and assessment and by the children's own ideas and interests;
Provide opportunities for children to engage in activities that are adult-initiated, child-initiated and adult supported;
Provide a secure and safe learning environment indoors and outdoors.

In mathematics, teaching will be based on the objectives in the current Foundation Stage documents with an emphasis on the use of concrete materials and real-life maths.

Resources

Each class is resourced with its own maths equipment, with some resources allocated to particular year groups. All additional maths equipment can be found centrally in the Maths Cupboard. ICT resources such as computer programs and ipads will be used to support learning where this is appropriate.

4. Home school Links

Homework

Mathematics lessons provide opportunities for children to practise and consolidate their skills and knowledge, to develop and extend their techniques and strategies, and to prepare for their future learning. These may be extended through out-of-class activities or homework on occasion. Because of our school's focus on home reading, formal maths homework is not usually set for children with the exception of those in Year 6. 'Mathletics' and 'Times Table Rockstars' learning platforms are available for children to use in school and at home and children are encouraged to participate on a voluntary basis through a range of awards.

Communication

Parents are invited to attend 'welcome to the year group meetings' at the start of each academic year. These meetings are used to inform parents about our approach to mathematics. Attainment and progress are reported to parents at parents' evenings in the autumn and spring terms and via a written report in the summer term. Parents are also invited to an inspire workshop once per academic year to work with their child on a number of activities, which often include a range of maths activities. The school website shares details of our mathematics curriculum for each year group.

5. Assessment

Assessment will take place at three connected levels: short-term, medium-term and long-term. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment. Teaching a unit of work will need careful initial and ongoing planning, informed by an assessment of children's learning. A cycle that supports this process is set out below:

assess – plan – teach – practise – apply – review

Short-term assessments will be an informal part of every lesson to check understanding and give the teacher information, which will help to adjust day-to-day lesson plans. Medium-term assessments will take place towards the end of each term or at the end of a topic, as appropriate. These may be informal or formal. A child who is identified as working 'off track' at any point will receive targeted intervention to help them to get back on track. Long-term assessments will take place towards the end of each term to assess and review pupils' progress and attainment. These will be informed by mathematics SATs tests for pupils in Year 6 and by other age standardised tests for years 1, 2, 3, 4 & 5. Teachers will also draw upon their own records of attainment against objectives taught that year and supplementary notes and knowledge about their class to produce a judgement against age-related expectations. This information will then be reported to parents and the child's next teacher.

Marking

Where possible, work is marked 'live' during the lesson to give children the opportunity to respond immediately to feedback. Work may also be marked at the end of each lesson (in line with the school marking policy) and, where appropriate, the children are given time to respond to this marking and complete any corrections or respond to any further questions or tasks set by the teacher.

Intervention

Assessment may, at times, identify children who are not working at age related expectations. In order to help these children catch up, they may be included in intervention groups (usually during the school day) where they will be removed from other lessons to work on activities to help them catch-up. These activities will take a variety of forms and may include: 1:1 tuition, small group work, pre-teaching, immediate intervention etc.

6. Reporting

Progress in maths is reported to parents at both autumn and spring parents' evenings. Written reports are sent at the end of the summer term and contain information about how the child is doing compared to age-related expectations. These reports also include the results of statutory assessment for children in the relevant year groups.

7. Monitoring and review

The coordination and planning of the mathematics curriculum are the responsibility of the subject leader, Sophie Miles, who also:

- supports colleagues in their teaching, by keeping informed about current developments in mathematics, and by providing a strategic lead and direction for this subject.
- gives the headteacher and governors a termly summary report in which she evaluates the strengths and weaknesses in mathematics, and indicates areas for further improvement.
- uses specially allocated regular management time to review evidence of the children's work, to observe mathematics lessons across the school and write and carry out the action plan.

A named member of the school's governing body is briefed to oversee the teaching of Mathematics. The Mathematics Governor meets regularly with the subject leader to review progress.

This policy will be reviewed at least every three years.

Signed: Sophie Miles

Date: February 2025