



St Mary's
Catholic Primary School and Nursery

MATHEMATICS SUBJECT STATEMENT

CURRICULUM AIMS

At St Mary's we shape our curriculum so that all pupils are provided with high quality teaching and learning, with Jesus Christ at the centre of all we do. We aim to teach pupils how to grow into positive, responsible citizens, who can work and co-operate with others while developing the knowledge and skills to achieve their true potential.

"The Christian life is a call to a deeper communion with God and with one another, and this finds particular expression in our schools, which are rightly recognised as being families themselves, where no one is a stranger and where everyone, whatever his or her background or academic ability, is welcomed, treasured, supported and helped to become the person whom God calls them to be."
Bishop Malcolm MacMahon.

We aim to provide a Catholic Christian education based on the life and teaching of Jesus Christ, in which the values of the Gospel underpin all aspects of school life;

To provide a friendly, nurturing environment in which the dignity of each person as a child of God is recognised and developed; and to promote the full potential of each child through a curriculum which develops spiritual, academic, creative, social and emotional growth;

To provide a curriculum which is enriching and challenging, where pupils experience the opportunity to learn in a wide range of contexts.

INTENT



At St Mary's we aim to teach children how to make sense of the world around them by developing their ability to calculate, reason and solve problems. We aim to support children with the ability to solve problems in a variety of contexts by delivering a mastery curriculum.

We aim for all children to master the key areas and domains in Mathematics, narrowing the gap between the most and least able learners. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress will always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly will be challenged to deepen their understanding by being offered rich and sophisticated problems and not accelerate through to new content.

Our aims in the teaching of mathematics are:

- to promote enjoyment of learning through practical activity, exploration and discussion;
- to develop confidence and competence with numbers and the number system;
- 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 developing measuring skills in a range of contexts;
- to help children understand the importance of mathematics in everyday life.
- to 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.
- to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.



IMPLEMENTATION



Power Maths, a mastery approach scheme, is used as the basis for the teaching of mathematics throughout KS1 and KS2. Daily lessons are structured as follows –

Discover and Share – An introductory problem for the lesson demonstrating context. Opportunities to model and time to explore the daily focus.

Think Together – Whole class exploration of the daily focus, involving explicit demonstrating and modelling by the teacher first, then children do it together in partners with teacher checks along the way.

Independent Application – All children answer questions based on the focus. Questions include varied fluency, reasoning and application. Questions promote independent work and independent thinking.

Reflect – An opportunity to reflect on the core focus of the lesson and look for evidence that the pupils have grasped the concept.

During our daily lessons we encourage children to count aloud, practice fluency, problem solving and reasoning skills and ask mathematical questions. We develop their ability to independently select and use appropriate concrete apparatus to support their conceptual understanding and build procedural fluency. They have the opportunity to independently access and use a wide range of resources to support their work. We develop the children's ability to represent problems using visualisation skills, including jottings and pictorial representations. Although mathematics is best taught discretely, it has many cross-curricular links. Teachers need to use opportunities in other subjects to rehearse skills in a context. Mathematics involves developing confidence and competence in number work, geometry, measures and statistics and the using and applying of these skills.

Mathematics is a symbolic, abstract language. To decode this language, symbols need to come alive and speak so clearly to children that it becomes as easy to understand as reading a story. We believe that all students, when introduced to a key new concept, should have the opportunity to build competency in this topic by taking the concrete-pictorial-abstract approach. The concrete-pictorial-abstract approach is fundamental within the Power Maths scheme.



Concrete – students should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

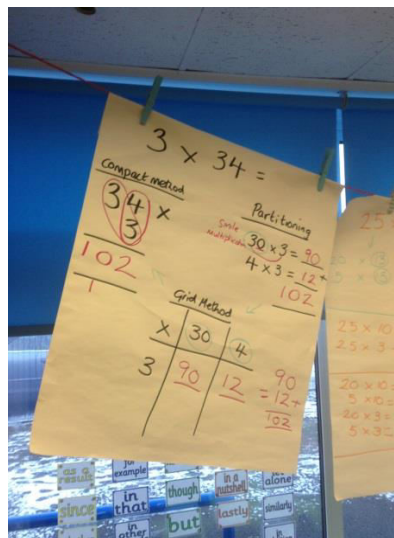
Pictorial – students should then build on this concrete approach by using pictorial representations. These representations can then be used to reason and solve problems.

Abstract – with the foundations firmly laid, students should be able to move to an abstract approach using numbers and key concepts with confidence.

All classrooms have access to manipulatives that can be used in the teaching of mathematics. Some more topic specific resources are located in a central store.



All classrooms have a display area specifically for mathematics. This is called a 'working wall' and will display items that children need to support and develop the unit's learning. For example, key vocabulary, success criteria, models, methods, key questions.





EYFS

The Early Years Foundation Stage Curriculum feeds into the National Curriculum. Use of cross curricular links enables children to use their mathematical learning in a real-life context. Pupils are given plenty of opportunities within sessions to use and apply the mathematical skills and concepts they have learned.



Mathematical concepts are developed through active exploration and their everyday play-based learning. EYFS practitioners provide opportunities for children to manipulate a variety of objects which supports their understanding of quantity and number.



Mathematics in the early years provides children with a solid foundation that will enable them to develop skills as they progress through their schooling and ensures children are ready for the

National Curriculum.

In the Early Years' Foundation Stage there are also specific mathematical areas for children to access in their everyday learning.



All children receive Quality First Teaching. Any children with identified SEND or in receipt of pupil premium funding may have work additional to and different from their peers in order to access the curriculum dependent upon their needs. In addition, our school offers a vibrant, demanding and varied curriculum, providing all our pupils with a range of opportunities in order for them to reach their full potential, enjoy and achieve regardless of their starting points.

IMPACT

Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Assessment in mathematics takes place daily using a range of strategies such as marking and feedback of work and verbal discussions with children.

At St Mary's teachers mark in pen. Correct answers are indicated by a \checkmark and incorrect answers may be identified and discussed with children where appropriate by using a pink highlighter. Some wrong answers may be part of the process a child goes through to solve a complex problem. Pupils are given time to respond to marking, usually with a teacher during daily practice. All corrected work is re-checked to ensure it is correct. Children may on occasions self/peer assess, which is completed in a different colour to their work, which allows them to have immediate feedback.

Assessment of learning for the units covered is completed half termly through fluency and reasoning assessments created by Power Maths.

Records are kept by staff. Pupils are formally tracked using the Classroom Monitor system. This data is used by the Mathematics Subject Leads, Senior Leadership team and Head teacher to review children against Age Related Expectations

based on their Key Stage starting points. Children who are not on track are identified for intervention/target teaching, which is reviewed half termly.

