



Mathematics Policy

Mission Statement:

St Mary's is a welcoming school who: learn together; live out Catholic values; celebrate all achievement and believe all is possible in Christ's hands.

Intent

From their first day to their last at St Mary's, we support our children on a journey of learning and faith.

In learning, we want our children, by the time they leave our school: to be numerate and literate, to have received their full entitlement in all areas of the curriculum, and to have the opportunities to succeed in areas of particular interest to them.

Mathematics can be found in every aspect of our lives. Therefore, at St. Mary's, we want children to develop an enthusiasm for the subject by providing memorable learning opportunities that foster curiosity. We want all children to have the confidence to 'have a go', the determination to find solutions and the resilience to try a different approach when a fresh perspective is needed. To achieve these aims we want our children to develop mathematical fluency giving them the knowledge they need to make informed choices when problem solving.

The 2014 National Curriculum for Mathematics aims to ensure that all children:

- become fluent in the fundamentals of mathematics
- develop conceptual understanding
- reason mathematically
- solve problems by applying their mathematics.

As children progress through KS1 and KS2 we want them to:

- develop an understanding of the number system including place value and number sequences
- develop rapid recall of addition facts and related subtraction facts
- develop rapid recall of multiplication tables and related division facts
- be able to make links between different areas of mathematics and identify patterns
- be able to make links between mathematics in the classroom and in the wider world
- select appropriate methods to solve problems (mental methods, jottings or formal written methods)
- use a range strategies to mentally solve problems
- gain the skills to carry out written calculations using formal methods whilst developing a secure understanding of how these methods work (See Written Calculations Policies)
- gain a strong understanding of mathematical concepts and use accurate vocabulary to communicate their knowledge
- be able to name 2D and 3D shape and describe their properties
- be able to use and apply units of measure (for length, mass and volume) and know the relationships between different them
- have regular opportunities to apply their mathematical skills to solve more complex problems, including those that involve logic and reasoning

Implementation

Mathematics Curriculum:

At St Mary's, Mathematics is taught in daily lessons throughout Key Stage 1 and 2. As core skills are integral to developing confident mathematicians, part of our daily lessons follow the Big Maths approach. Within these sessions children develop rapid recall of number facts (including times tables) and build up mental strategies for calculation. We develop reasoning skills in all lessons through the use of rich questioning that requires children to think deeply about mathematics. As well as providing children with the skills to carry out calculations they will also be given regular opportunities to apply their knowledge to a range of problems.

To support the delivery of the National Curriculum for Mathematics teachers use planning support developed by the Lancashire Mathematics Team. Teachers also use a range of engaging resources developed by themselves and taken from recommended providers.

Pupils are taught by:

- engaging in daily mathematics lesson planned by the class teacher that take into consideration the needs of individual within the class
- using a range of practical resources that develop conceptual understanding throughout Key Stages 1 and 2
- developing the use of concrete resources into pictorial forms where appropriate
- following the written calculations policy and building on pictorial representations to move towards more abstract mathematics
- being provided with clear models and process criteria to refer to
- being given the opportunity to practice and consolidate their skills
- working both independently and collaboratively
- regularly offering rich and sophisticated problems as well as exploratory and investigative tasks
- receiving regular relevant homework that further consolidates skills'
- providing clear feedback that addresses misconceptions and challenges pupils thinking.

Roles and Responsibilities:

The Mathematics Subject Leader will:

- raise the profile of mathematics
- model lessons, as appropriate to new staff, NQTs and peers to support continued professional development.
- ensure the high quality of mathematics displays around the school
- organise events such as 'World Maths Day' and STEM week
- support staff in providing opportunities for learning outside the classroom in mathematics and will identify and organise opportunities which enable this
- monitor progression and continuity of mathematics throughout the school through lesson observations and regular monitoring of outcomes of work in exercise books
- ensure that all staff have access to year group plans and the relevant resources which accompany them
- monitor children's progress through the analysis of whole school data
- use data to inform the School Development Plan (SDP) and School Improvement Plan (SIP) which will detail how standards in the subject are to be maintained and developed further
- organise, audit and purchase central and class based mathematics resources

- keep up to date on current developments in mathematics education and disseminate information to colleagues
- extend relationships and make contacts beyond the school
- develop opportunities for parents/carers to become more involved in mathematics education
- ensure that all staff have access to professional development including observations of outstanding practice in the subject

The class teachers will:

- Plan and deliver Mathematics lessons to their class
- Assess the work and progress of pupils and communicate to the subject leader
- Identify any other opportunities for mathematics in the wider school curriculum
- Have responsibility for the teaching, learning and assessment of Mathematics and report on pupil progress to parents.

Impact

Assessment, Record Keeping and Reporting:

To measure the impact of the delivery of mathematics we use a variety of formative and summative assessments.

Teachers assess continually through the use of questioning and marking. These judgements will inform future planning and enable structured support to take place (intervention) as well as providing additional challenge for more able learners. Throughout the year (often at the end of a unit) teachers use Key Learning Indicators of Performance (KLIPs) and Learning and Progression Steps (LAPS) to assess children's progress in relation to age related expectations. These judgements are shared with the Headteacher at Pupil Progress Meetings at the end of each term. This information is also shared with the Mathematics Subject Lead following these meetings. Teachers may choose to use more formal testing to inform this data at their own discretion. Information from these assessments is used to set children's target, identify where additional support may be required and to inform children and parents of their progress during parents evening and end of year reports.

At the end of Key Stage 1 (Year 2) and Key Stage 2 (Year 6) children carry out National Curriculum Tests in mathematics. This data along with Teacher Assessment is used to ensure children meet their targets in relation to age related expectations. Children in Years 3, 4 and 5 carry out optional tests produced by Testbase at the end of the school year. This information is used to support teacher assessment, inform whole school and subject development priorities for the next school year and to compare our school to the wider community of schools nationally.

Children also use regular self-assessment at the end of lessons and units to convey their understanding. To allow them to celebrate the progress they are making in their learning they will use short assessments each Friday, as part of the Big Maths programme, using *Beat That* tests where they aim to improve on the previous weeks score.

Review:

The subject leader will review the policy annually. Policy produced September 2019.