<u>Chorley St Mary's Catholic Primary School and Nursery</u> Mathematics Policy

Mission Statement and Vision:



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.

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.

Rationale - What we believe mathematician are. In our school we think...

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. A mathematician is someone who uses their knowledge of mathematics to solve problems this applies to all the pupils at St. Mary's.

<u>Intent - what is being delivered?</u>

To develop the mathematicians in our school we want our children to achieve mathematical fluency giving them the knowledge they need to make informed choices when problem solving.

Through the teaching of Mathematics at St. Mary's we aim to equip the children with the knowledge and skills to achieve their full potential in the subject.

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.

EYFS

The Statutory framework for the early years foundation stage (2021) provides us with a clear set of expectations that informs our curriculum.

By the end of EYFS children will be able to:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.
- Verbally count beyond 20, recognising the pattern of the counting system;

- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

KS1 and KS2

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 (See below);
- 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 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);
- Have regular opportunities to apply their mathematical skills to solve more complex problems, including those that involve logic and reasoning.

Times Tables

The new National Curriculum (2014) states that by the end of year 4, pupils should be able to recall multiplication and division facts for multiplication tables up to 12x12. In order to reduce cognitive load and free up working memory children at St. Mary's are taught to become fluent in times tables and related division facts. The following progression sets out how we aim to achieve this automaticity:

- Year 1 Count in multiples of twos, fives and tens;
- Year 2 Recall 2, 5 and 10 multiplication and division facts;
- Year 3 Recall 3, 4 and 8 multiplication and division facts;
- Year 4 Recall 6, 7, 9, 11 and 12 multiplication and division facts;
- Year 5/6 application of multiplication and division facts to problem solving.

Children in Year 4 are also required to take a multiplication tables check (MTC) in the Summer Term. The purpose of the check is to determine whether pupils can fluently recall their times tables up to 12, which is essential for future success in mathematics.

Information about the MTC check can be found here.

The pupils at St. Mary's have access to Times Tables Rock Stars to help consolidate their learning in school and at home.

Implementation - How we achieve our intent

Mathematics Curriculum:

At St Mary's, Mathematics teaching follows the principles of the mastery learning approach. This means that all children, regardless of ability, are given the opportunity to master the key concepts before moving on to the next topic. Teachers follow a termly overview that breaks down the sequence of learning into 'small step'. We predominantly use the White Rose Maths Scheme to structure learning from Nursery to Year 6 though teachers will also use their professional judgement to supplement or exchange these materials with resources taken from other reliable sources (National Centre for Excellence in the Teaching of Mathematics (NCETM)).

The main elements of the UK approach to mastery are outlined in figure 1. These characteristics underpin the teaching of mathematics at St. Mary's.

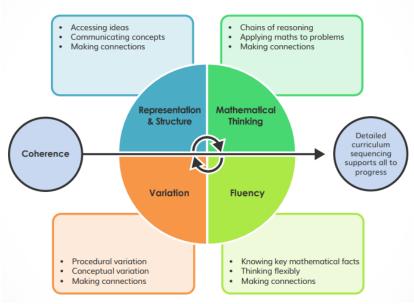


Figure 1

Representations and Structures	Mathematical Thinking	Fluency	Variation
Carefully selected representations expose the structure of the mathematics.	Looking for patterns and relationships and connections. Pupil engage in mathematical thinking in all lessons using precise mathematical language.	Efficient, accurate recall of key number facts and procedures. This will reduce cognitive load and free up working memory.	Conceptual - Representing concepts being taught in more than one way. Procedural - Purposeful changes made to the process of learning that enables pupils to make connections
Coherence	Learning is broken down into connected small steps that build on previous learning.		

As core skills are integral to developing confident mathematicians, part of our daily lessons focuses on developing automatic recall of number facts (including times tables). 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.

Pupils in EYFS are taught through:

- Directed teaching (three times per week);
- Small group work activities (at least three times per week);
- Continuous provision structured play modelled by an adult (ongoing throughout the week).

In addition to this, Reception through to the end of KS2 follow the Mastering Number programme developed by the NCETM. Where deemed necessary this may continue into Year 3 Autumn term.

Pupils in KS1 and KS2 are taught through:

- Engaging daily mathematics lessons (between 45 70 minutes per day) planned by the class teacher that take into consideration the needs of individual within the class;
- The use of a range of practical resources that develop conceptual understanding;
- 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;
- Clear models and process criteria to refer back 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 learning;
- 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 and Senior Leadership Team;
- 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.

Inclusion

At St Mary's, we are committed to ensuring that all pupils, regardless of background, ability or need, have access to high-quality mathematics teaching. Lessons are adapted to meet the needs of all learners, including those with SEND, EAL, and vulnerable pupils. Teachers use a range of strategies and resources to support understanding, including concrete manipulatives, visual representations, and structured scaffolding. Additional support and interventions are provided where necessary to ensure every child can achieve their full potential in mathematics.

Impact

Assessment, Record Keeping and Reporting:

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

Teachers assess continually through the use of questioning, observation, and marking. These ongoing judgements inform future planning, enable structured support (intervention), and provide additional challenge for more able learners. Teachers also use end-of-unit assessments to evaluate children's progress against age-related expectations. In KS1 and KS2, end-of-term assessments from White Rose Maths further support teacher judgements and help identify gaps in learning.

These judgements are shared with the Headteacher during Pupil Progress Meetings at the end of each term. The Mathematics Subject Lead has access to this data via the pupil tracking hub and uses it to monitor progress, set targets, and identify pupils requiring additional support. This information is also used to inform parents during parents' evenings and in end-of-year reports.

At the end of Key Stage 2 (Year 6), children complete National Curriculum Tests (SATs) in mathematics. These results, alongside teacher assessments, are used to ensure pupils meet their targets and to inform whole-school development priorities.

In addition to formal assessments, teachers gather evidence of impact through:

- **Pupil voice** children are encouraged to reflect on their learning and share their experiences of mathematics.
- Lesson observations used to monitor teaching quality, pupil engagement, and the effectiveness of strategies.
- Work scrutiny regular reviews of pupils' books help identify strengths, misconceptions, and consistency across the school.
- Feedback both verbal and written feedback is used to address misconceptions and deepen understanding.

The Mathematics Subject Lead uses this range of evidence to evaluate the effectiveness of teaching and learning, inform the School Development Plan (SDP) and School Improvement Plan (SIP), and guide future professional development.

Review:

The subject leader will review the policy annually. Policy produced May 2024.

Reviewed October 2025

Next review due: October 2026