Intent

Maths is a creative and highly inter-connected discipline that has developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and many forms of employment. Maths is a fundamental aspect of human cognition and reasoning, serving as a vital skill for fostering independence. It guides us in comprehending and making sense of the world.

At St. Mary's, we firmly believe that Maths equips children with essential life skills, including:

- Proficiency in understanding numbers and performing calculations
- Problem-solving capabilities
- Inquisitive thinking
- Development of reasoning skills
- Financial literacy

These skills extend to various everyday applications, such as calculating total expenses for purchases, determining the right time to catch a connecting train, or precisely measuring ingredients while following a recipe. Maths, at St. Mary's, is instrumental in honing problem-solving and reasoning abilities, enabling individuals to address a diverse array of challenges.
Furthermore, the integration of mathematics with numerous other disciplines underscores its foundational role in providing knowledge and skills that extend into subjects like science.

Our goal is to ensure that every child leaving St. Mary's possesses the competence and autonomy of a proficient mathematician. They will carry the confidence and skills needed for fluent calculation, confident reasoning, and efficient problem-solving, fully prepared for the next phase in their educational journey.

Implementation

At St Mary's Primary School, our maths curriculum is delivered through the NCETM subject spines with the support of several other Maths schemes including White Rose Maths, 'I see Reasoning', and the Oak Academy. These resources support our teachers to deliver well-structured and exciting mathematical opportunities that enable our children to learn, revisit, and progressively develop their skills in maths at an age-appropriate level. Our approach utilises concrete, pictorial, and abstract resources to help the children develop their understanding of Maths.

Collaborative Maths curriculum planning lies at the heart of what we do. Teachers and other adults working in EYFS are fully trained in supporting early mathematical development and helping our youngest learners to acquire early number. This is achieved through practical and engaging activities, which children can access, alongside adults or independently with peers, to practise their maths skills. In KS1 and KS2, maths lessons are planned to follow the small-step mastery approach to acquiring maths skills as set out in NCETM ready to progress criteria. This scheme supports teachers to plan and deliver lessons which teach pupils essential skills, give them time to develop their fluency and apply their knowledge to practise mathematical reasoning and solve problems. Fluency, Reasoning and Problem solving skills are developed in each teaching sequence and maths Lessons are sequenced thoughtfully, building on prior learning and looking forward to the next step. Teachers promote and encourage pupils to work collaboratively, as well as independently, and provide excellent modelling of all mathematical processes and concepts as well as asking questions that challenge and deepen childrens' understanding of maths.

Our curriculum is frequently reviewed to ensure that it is current and effective and teachers are supported and aided in their teaching of maths through appropriate high quality CPD ensuring confidence in the skills and knowledge that they are required to teach. All staff are encouraged to raise questions, seek support and request further training if needed. Good practice and learning from CPD is shared between staff at staff meetings.

Assessment informs teachers planning and is an important part of how teachers plan. Where appropriate, informal pre and post unit assessments are used alongside termly assessments (NTS Rising Stars Assessments) which help teachers to gather an understanding of their pupil's knowledge and skills.

Resources and equipment are audited regularly so that children have materials of high quality and accuracy to support their learning. Our resources allow us to better use models and images to support learning and enable the progression from concrete to pictorial to abstract. Children become familiar with these resources in KS1 and by KS2 can access them independently where needed. Across the school practical resources are available to all children when needed or wanted. Vocabulary is an important part of mathematical understanding and as such correct, standardised, mathematical vocabulary is used by all. This is discussed with and explained to children who are then encouraged to use it independently when talking about maths. Relevant vocabulary is displayed clearly on working walls and is referred to in lessons.

At St Mary's, children with SEND are supported in maths through adaptive teaching, ensuring they are taught within the classroom environment alongside their peers. Pupil passports and support plans play a crucial role in addressing individual needs, while timetabled interventions provide additional maths support for children with SEND. All students receive regular group support during maths lessons, with further individualized or small group assistance offered when specific needs are identified. This approach ensures that all children, including those with SEND, receive the necessary support to succeed in maths.

We know fluency is developed through repeating, reinforcing and revising key skills. Therefore, regular arithmetic takes place in all classes separate to maths lessons, this utilises Numbersense up to Year 2. Children are given time to practise and perfect their calculation strategies including giving pupils the opportunity to make appropriate decisions when estimating, calculating and evaluating the effectiveness of their chosen methods. In KS2 these fluency sessions are used to reinforce key skills and any current work.

Within maths lessons, task types are varied to suit different pupils and their learning needs. Investigative tasks are designed to allow pupils to follow lines of enquiry and develop their own ideas, justifying and proving their answers. Children work both collaboratively and independently when solving problems which require them to persevere and develop resilience. Further development of reasoning remains one of our key focuses.

Feedback is given in a variety of ways to ensure pupils are well informed and making visible progress. Discussion is essential to learning and children are encouraged to discuss their thoughts, ideas and methods with a partner, group or an adult.

Impact

By immersing children in engaging and challenging maths activities, alongside a focus on key skills and enjoyment, students at St Mary's develop a genuine enthusiasm for the subject. They enjoy discussing their problem-solving strategies, sharing their mathematical achievements with peers, and talking about their favourite maths concepts.

Children's maths books demonstrate a consistent adoption of new skills as they progress through the school, often drawing connections between different mathematical concepts taught in class. Maths learning is regularly assessed through extended tasks, which provide formal assessments that complement the ongoing, informal evaluations happening daily in the classroom and in their books.

Children are also encouraged to review, edit, and assess their own and their peers' work. This reflection on their learning often drives their eagerness to set and achieve new goals, enabling them to discuss their next steps with enthusiasm.

The impact of maths teaching at St Mary's is monitored through a range of methods, including learning walks, lesson observations, coaching opportunities, book scrutinies, discussions with children, and audits. Records of these assessments are maintained in subject leader files and on the school drive, providing a comprehensive overview of student progress and teaching effectiveness.