

St Mary's Catholic Primary School

Living and Learning Together – Shining in our Faith



Mathematics Intent Document

Intent

At St Mary's Catholic Primary School, we believe that all children can achieve in their Maths learning. All staff are committed to the teaching of mathematics, promoting it as an enjoyable and fundamental part of the curriculum and also life. It is taught as a creative and highly inter-connected subject, underpinned by the three statutory aims of the National Curriculum: **fluency, reasoning and problem solving**.

Our intent is for all children to become fluent mathematicians, who can confidently recall and apply mathematical knowledge and demonstrate conceptual understanding. We aim for all of our children to be proficient users of mathematical language, which will support them in their mathematical reasoning in different contexts. Our ambition is for children to become competent problem solvers, through applying their mathematical knowledge to a wide range of problems, in maths lessons, other subjects and in 'real life'.

Implementation

Each programme of study is built around the concepts of: **fluency, reasoning and problem solving**.

At St Mary's our staff deliver a 45 minute maths sessions per day. In Key Stage 1 we also deliver regular fluency lessons which follow the Mastering Number Programme in EYFS and KS1. In Key Stage 2 the children take part in daily key skills lesson which are 15 minutes long and develop the children's fluency in number skills.

We also follow a systematic, whole class approach suggested by the NCETM to teaching times tables in KS2. Key Stage 2 children take part in daily times tables lessons, to support the children's rapid recall of times tables, that are planned in a structured and sequential way.

Our maths lessons are planned using the mixed age White Rose Maths Schemes of Learning in order to develop a coherent and comprehensive conceptual pathway through Mathematics. The focus is on all of the children progressing together in line with the Teaching for Mastery approach. Learning is broken down into small, connected steps, building on prior knowledge.

Contexts and representations are carefully chosen to develop reasoning skills and to help pupils link concrete ideas to abstract mathematical concepts. The use of high quality materials and tasks to support learning and provide access to the Mathematics is integrated into lessons. Maths lessons are taught daily to introduce, consolidate and strengthen either new or previously taught concepts. Teachers plan for and address misconceptions arising from White Rose sessions to ensure that all children are developing their mathematical understanding. All areas of Maths are taught in line with the National curriculum with each year group given sufficient time to embed the mathematical concept.

White Rose has a clear focus on fluency, reasoning and problem solving. This is supported by conceptual and procedural variation and Mathematical thinking. The National Curriculum states that pupils should become fluent in the fundamentals of mathematics through varied and frequent practice. We believe fluency in maths is about developing number sense and being able to use the most appropriate method for the task at hand; to be able to apply a skill to multiple contexts.

Children become confident in the two types of fluency:

Conceptual fluency, e.g. exploring the five strands of place value, (counting, recognition of cardinal numbers, knowing what each digit in a number represents, understanding our base-10 structure and exchanging), what an equivalent fraction is and identifying key features of different representations of data.

Procedural fluency, e.g. $+$ $-$ \times \div calculation methods linked to whole numbers, fractions and decimals and exploring step by step mental and written methods.

Children are given regular opportunities to recall known facts, develop number sense, know why they are doing what they are doing and know when it is appropriate and efficient to choose different methods and will apply skills to multiple contexts e.g. multiplying and dividing by 10 to convert units of measurements.

Reasoning and problem-solving is planned and interwoven into the Mathematics curriculum.

Impact

Our well-planned Maths curriculum ensures that children are fluent and confident mathematicians, who exude an enjoyment and curiosity about the subject. Our children are enthusiastic and competent mathematical problem solvers, within maths lessons and across the curriculum. Children perform well in Mathematics and are very well prepared for the next stage in their education.

In order to ensure our aims have been met, we scrutinise learning through:

- Assessment of the children's understanding of mathematics through the White Rose Maths assessment checks for their current year group both at the end of each topic and also termly – Assessment for learning.
- Talking to children during the lesson to ensure they have understood the learning objective – Assessment for learning.
- Mark completed work – Assessment for learning.
- Misconceptions and 'gaps in learning' are identified by staff, using Assessment for Learning, and planned interventions or whole class lessons are taught to address these misconceptions quickly and efficiently.

The above enables the teacher to make an informed judgement on the children's understanding and record their mathematics ability on the school tracking tool, Lancashire Tracker hub, on a termly basis.

For any additional information regarding the Maths curriculum please contact Mrs. McGrath (Subject Lead) or Mrs Ormsby (Subject Governor).