**St Margaret Mary’s Curriculum Statement**

**We try to follow Jesus in everything we do.**

**Maths Intent**

Our Maths curriculum has been specifically tailored to meet the needs of our school community. It is designed to be broad and balanced, providing all pupils with the opportunity to be curious and wise in their learning and knowledge; to be attentive and discerning in order to make sense of the world around them and give purpose as to why we learn about and from Maths. This will help them become faith-filled and hopeful in their abilities to change and transform our society.

The National Curriculum states:

*“Mathematics is a creative and highly inter-connected discipline that has been 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 most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.”*

At St Margaret Mary’s we believe that all children can achieve in mathematics. We aim to ensure that all children become FLUENT; REASON and EXPLAIN mathematically and SOLVE PROBLEMS.

We aim to do this through:

* providing cross-curricular opportunities
* creating a lively, exciting and stimulating environment
* promoting the concept that acquiring maths knowledge and skills provides the foundation for understanding the world
* encouraging children to use mathematical vocabulary to reason and explain
* developing a curiosity of maths, creating a sense of awe and wonder
* challenging children to stretch themselves and take risks in their learning

At each stage of learning, children should be able to demonstrate a deep, conceptual understanding of mathematical topic and build on this over time. Children should be able to select which mathematical approach is most effective in different scenarios as their understanding of mathematical topic becomes deeper.

**Implementation**

At St Margaret Mary’s we work towards a mastery approach in the teaching and learning of mathematics.

* The expectation is that most pupils will move through the programmes of study at broadly the same pace.
* Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content.
* Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

To support our mastery approach, the school uses a variety of resources. We regularly work with and attend training sessions with Tara Loughran (maths consultant with NW Three Maths Hub). We use White Rose resources, Maths No Problem and Power Maths teacher resources.

We plan by using the 5 Big Ideas (provided by the NCETM/Maths Hub Mastery Specialist Programme). These include

* Mathematical Thinking
* Representation and Structure
* Coherence
* Variation
* Fluency

Lesson Design

In **EYFS**, we aim to provide solid foundations of number sense and we put emphasis on mastery of key early concepts. Learning is based on pupils’ interests and current themes. It focuses on the expectations from Development Matters/ Early Years Outcomes. Through work with NW Maths Hub 3, we have participated in the Developing Mathematical Fluency in EYFS Programme, as well as the I Can Calculate Programme (from counting to calculating in early maths). Pupils spend time exploring the ‘story’ of numbers to twenty and use different models and images to help form the solid foundation for further progress. Teachers use the VCPA approach to conceptual development (verbal, concrete, pictorial, abstract).

In **Key Stage 1**, pupils focus on strengthening these early foundations in numeracy, developing confidence and mental fluency. A huge focus is on working with different number bonds to twenty and exploring the different strands of mathematics within this, wherever possible. Teachers continue to use the CPA approach whereby concrete materials, pictorial representations and abstract symbols, allow children to visualise maths in varied ways, see connections and to independently explore and investigate a topic. Practical activities and resources, again linked to pupils’ interests and current themes, offer the children a deeper mathematical understanding of more complex concepts.

Throughout Key Stage 1, it is important that children gain a secure knowledge of number and place value and become confident when using the four operations in both formal methods as well as problem solving where often the approach is not immediately evident.

Other subjects may have strong links to some maths topics allowing cross-curricular teaching. For example, shape through art or computing, measures through science or coordinates in geography. This is to ensure we continually maximise learning opportunities for all pupils across an entire curriculum.

In **Lower Key Stage 2,** the principal focus of mathematics teaching is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. The CPA approach continues to be used to deepen children’s understanding. By the end of Year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Regular TTRS competitions are set to encourage children to learn these.

In **Upper Key Stage 2,** the principal focus of mathematics teaching is to ensure that pupils extend their understanding of the number system and place value to include larger integers. The CPA approach continues to be used to deepen children’s understanding. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of Year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages.

**Impact**

A good mathematician at St Margaret Mary’s should develop a range of skills as a result of such teaching: make connections and links; develop problem solving skills; and develop reasoning skills. We aim to develop such skills so that they are transferable to other curriculum areas, particularly science, geography and computing. We aim to develop competent and confident mathematicians who enjoy lessons and all aspects of maths in the world around them. We aim to do this by constantly challenging pupils to achieve their full potential. The structure of the mathematics curriculum ensures that all children are taught the strands expected from the 2014 National Curriculum.

**Assessment**

As well as live marking and AfL in daily lessons, White Rose end of unit assessments will be carried out after sufficient time to assess children’s secure understanding of a numeracy topic. White Rose end of term assessments will also be used to assess attainment and progress. The teaching of mathematics is monitored frequently by leaders through lesson observations, learning walks, book scrutiny and pupil interviews.

Through the design of the mathematics curriculum at St Margaret Mary’s, this ensures that we are able to maintain high standards of attainment above that of Manchester and national standard.