**St. Michael’s CE Primary School**

**Maths Curriculum Plan**



*‘The national curriculum for mathematics aims to ensure that all pupils:*

* *become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.*
* *reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language*
* *can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.’*

Curriculum Intent

At St. Michael’s, we intend that all children become confident, resilient and determined mathematicians. Our maths curriculum challenges our children to manipulate the knowledge and skills that they learn in order to be able to solve a wide range of problems, drawing on prior knowledge and explaining their understanding as they work. Careful, structured planning enables small steps and includes focussed questioning, enabling pupils to deepen their understanding of mathematical concepts. Teachers expose and address misconceptions and build the foundations that our children need in order to progress further in their mathematics education.

We use the ‘mastery approach’ to mathematics. We teach our children to become independent mathematicians, to use resources to make explicit the hidden mathematical structures and ideas and to challenge themselves through the application of their understanding. Teachers select purposeful tasks and questions that develop every child’s understanding and guide their learning step by step. Teaching deepens our children’s learning of mathematical concepts using a variety of appropriate models. Teachers provide opportunities for conceptual variation within lessons, as standard/non-standard examples are considered and discussed.

All teachers understand that a solid, deep, sophisticated understanding of number is congruent with success across the curriculum and strive to enable fluency. Place value and number objectives, including the four operations, are prioritised within our long term planning, to emphasise that these areas of the curriculum underpin good understanding and progress.

Curriculum Implementation

We use NCETM Mastering Number from Reception to Year 2 and White Rose Maths based planning throughout school, backed up with other appropriate resources to ensure that pupils experience a range of problems presented in varied ways. A clear calculation policy ensures progress through the years as methods and strategies are introduced step by step to build on prior learning. Regular arithmetic and mental maths teaching are key features that ensure fluency and success for our pupils. Learning is deliberately chunked to allow pupils to practice a new skill and apply recently acquired knowledge before the next small step is introduced to move learning on still further. Classroom working wall displays include representations, methods, key vocabulary and stem sentences to support pupils as they work independently. Recall od numbers facts is supported by regular practice including the use of Time Tables Rock Stars for multiplication and associated division facts.

Curriculum Impact

The maths subject leader regularly monitors and evaluates the effectiveness of mathematics teaching and learning across school in a variety of ways including pupil voice, lesson walks, work analysis, assessment information from White Rose end of unit assessment questions, and discussion with teachers. This enables further improvement through adapting targets and setting action plans as appropriate. Individual and whole school feedback, support with planning and advice, resources, and CPD needs are also addressed.

This results in pupils who attain well and make excellent progress through school regardless of their starting points. Teachers have equally high expectations for all pupils and pupils themselves are ambitious for their own learning. Children are able to use and apply understanding to multiple contexts and are able to choose the most appropriate method for a particular task. Regular teaching of fluency-based knowledge ensures that all pupils understand and have sufficient time to practise what has been taught. They can reason verbally and then complete written explanations as they mature, which requires them to approach a problem in a systematic way. Being able to explain how they reached the answer is an integral part of the children’s learning. To allow children to work successfully, they need to feel confident about talking through maths concepts recognising that making mistakes along the way is a natural part of overcoming learning challenges. Sentence stems provide additional support for pupils who need help with expressing their methods and reasoning. They are able from a young age to demonstrate that they can use representations and resources to support and explain using technical vocabulary correctly. Visual representations enable pupils to make connections between their own experience and mathematical concepts, giving them clear insight into abstract mathematical ideas.

Outcomes for pupils indicate strongly that children are able to apply their increasing knowledge and skills to a range of problem solving tasks and questions, and to real-life situations and contexts. We build confidence and resilience in every child through positive reinforcement, praise and ensuring success. Approaching each lesson with a ‘Can I…’ statement, we enable pupils to know exactly what they will learn and how to achieve which in turn promotes positive thinking in all maths learning.