

## Mathematics at St. Michael's

At St Michaels V.A. Junior, mathematics is a core subject and has high priority within our school curriculum. Through our proactive approach, we aim to develop a love of mathematics and create an atmosphere where all children strive to learn. To achieve this, we constantly review our practice to incorporate research and development in the field of maths teaching.

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 nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

### Intent:

With these broad aims in mind, we deliver a curriculum which:

- Allows children to be a part of creative and engaging lessons that will give them a range of opportunities to explore mathematics.
- Gives each pupil a chance to believe in themselves as mathematicians and develop the power of resilience and perseverance when faced with mathematical challenges.
- Recognises that the habits of thinking mathematically are life-enriching, as mathematics underpins much of our daily lives and it is therefore of paramount importance to become numerate in order to participate fully in society and democratic processes.

- Makes rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.
- Enables children to build a deep conceptual understanding of concepts which will enable them to apply their learning in different situations (including cross-curricular links).
- Is in line with the expectations in the National Curriculum 2014.

## Implementation

To enable effective implementation of our vision we support the following key indicators through regular professional development:

- In school, we follow the National Curriculum and use a variety of resources (e.g. Maths No Problem, Power Maths, White Rose, Third Space learning and Nrich) to support teachers with their planning. Teachers use the school's Maths Progression Map and year group Medium Term Plans to ensure consistency in sequencing and progression.
- The calculation policy is used within school to ensure a consistent approach to teaching the four operations over time.
- Daily lessons include a fluency starter. Problem solving and reasoning are integral throughout lessons. Daily challenges are prepared to extend and deepen learning.
- Children are taught through clear modelling. Using a CPA (concrete, pictorial and abstract) approach, concrete manipulatives and pictorial representations are used to support conceptual understanding.
- Teachers know where their children are through the use of assessment; this knowledge informs the teaching and learning sequence.
- Formative assessment within every lesson helps teachers to identify the children who need more support to achieve the intended outcome and those who are ready for further challenge.
- Summative assessment takes place at the end of each half term and children's attainment and progress is discussed within year group meetings.
- The teaching and learning of mathematics is monitored by leaders

through learning walks, lesson observations, book scrutinies and pupil discussions.

- Termly CPD is provided by subject leaders to keep staff abreast of mathematical developments and provide training.

## Impact

- Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child, so that:
- Well planned sequences of lessons enable children to think mathematically, develop conceptual understanding and communicate mathematical ideas.
- Children demonstrate a quick recall of facts and procedures.
- Children are able to apply their knowledge to a range of problems and make mathematical connections.
- Children show a positive mathematics mindset.
- Children perform broadly in line with, or above, national expectations.

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