

Barford St. Peter's C.E. (V.A.) Primary School

Together we love; together we learn



Mathematics Policy

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Mathematics Policy

CURRICULUM INTENT

Mathematics is a fundamental, integral part of our daily lives. The mathematical skills that our pupils develop at Barford St. Peter's Primary School will ensure that they have the secure foundations and mathematical resilience necessary to achieve at secondary school and beyond. We therefore aim to provide a high quality Mathematics curriculum which will inspire, challenge and engage the pupils at our school so that they develop the essential skills to become confident, flexible mathematicians resilient in the face of challenge and confident in the selection and execution of mathematical strategies.

“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.”

The National Curriculum 2014.

AIMS

The National Curriculum for Mathematics aims to ensure that all pupils:

1. 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.
2. Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
3. 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 IMPLEMENTATION

The teaching and implementation of the Mathematics curriculum at our school is based on the National Curriculum and planned using White Rose resources, complemented by a range of additional activities. The National Curriculum divides Mathematics into the following areas:

- Number – place value
- Number – addition and subtraction; multiplication and division
- Number – fractions, decimals & percentages
- Measurement
- Geometry
- Statistics

Our teaching of Mathematics places an emphasis on the mastery approach; teachers provide fluency, reasoning and problem-solving activities to ensure that a secure understanding of mathematical concepts is attained and developed.

We have adapted the White Rose Mathematics curriculum to ensure that the progression of skills matches the needs of the pupils at our school. We then use a range of appropriate resources to ensure that our lessons are diverse, engaging and bespoke to our school community.

Before beginning a new area of learning with our pupils, prior knowledge is assessed and any misconceptions identified. These initial assessments are then used to inform future planning and interventions are used as required.

Teachers at our school are encouraged to use a variety of strategies to deliver the curriculum to their year group. These strategies include:

- Practical resources - to explore concepts and to understand why a particular method works.
- Fluency – to ensure through repetition that key concepts are secure.
- Problem Solving – to ensure that our pupils can first identify the strategies needed to solve a problem and then to accurately apply these strategies to achieve the solution(s).
- Reasoning – to encourage pupils to explain concepts and justify their opinions.
- Conjecture – to encourage pupils to develop their own theory/idea and then explore this.
- Collaboration – to encourage pupils to use language and co-operation skills to solve problems together.
- Assessment – to confirm our pupil attainment and discover which areas need to be re-visited.

CURRICULUM IMPACT

Through the implementation of the Mathematics curriculum as outlined above, the pupils at Barford St.Peter's will be:

- Confident in the recall of the key facts for their year group.
- Confident in their ability to identify the strategies needed to solve a maths problem.
- Accurate in the application of both mental strategies and formal written methods.
- Able to articulate their reasoning and mathematical thinking using the appropriate vocabulary.
- Able to identify patterns and make connections between mathematical concepts.
- Able to see for themselves the progress they are making and to be proud of it.
- Flexible learners – resilient in the face of challenge and confidently able to adapt to a different strategy if the initial approach does not work.

ASSESSMENT

Ongoing teacher assessments take place throughout the year. Teachers use this information to inform future lessons; ensuring that children are supported and challenged appropriately. Attainment and progress in Early Years is recorded using Tapestry (an online profile) and can also be seen in their Learning Journals.

In both Key Stage 1 and 2, teachers use assessment to try to ensure that there are no gaps in learning and that pupils are building on previous knowledge, thus securing the progression of skills and increasing confidence in mathematical thinking.

In both Key Stage 1 and 2 pupils are assessed using the statutory assessments. In addition to these formal assessments, teachers also use informal assessments gathered from assessment tasks and software feedback from Mathletics and Times Tables Rock Stars.

Attainment and attitudes to learning in Mathematics are reported to parents annually in school reports and through parents' evening consultations.

MONITORING AND INCLUSION

In addition to the assessments completed by the class teacher, the subject leader also carries out regular monitoring activities including pupil interviews, book trawls and learning walks. These monitoring activities are designed to ensure that pupil progress is monitored and appropriate intervention or support put in place as necessary.

To support the subject leader in this task, there are also termly pupil progress meetings between the class teacher and head teacher which focus on attainment in each class, identifying both strengths and areas to develop. Professional development/support for the teacher and/or pupil interventions will then be explored and the appropriate solution put in place.

Pupils with special educational needs are supported through additional adult support, differentiation or scaffolding of the task with additional resources. These pupils also have SEND support plans that are reviewed every term and new targets are set as required.

PROGRESSION IN CALCULATION

Please see the attached White Rose policies for information regarding progression in calculation strategies:

- White Rose addition & subtraction policy
- White Rose multiplication & division policy