

Bowhill Primary School - Mathematics Policy

Intentions

Mathematics is an essential part of everyday life and thus of all children's education. Here at Bowhill Primary School, mathematics is a positive part of our daily routine. We intend to provide all pupils with the mathematical skills, knowledge and understanding they need for their future. We teach a carefully planned, in-depth curriculum, which builds on prior knowledge to develop skills and fluency, so that children can make connections between mathematical concepts and reason mathematically. We foster analytical minds and confident communication in mathematics, providing daily opportunities to explore mathematical ideas and develop mathematical thinking. We recognise that understanding the language of mathematics is essential. Therefore, in addition to teaching it as a discrete subject, it is integrated throughout our curriculum. We aim to routinise the use of mathematics and use it to solve everyday problems as well as develop specialised understanding and particular experiences. We want all pupils to develop a love for the beauty and brilliance of mathematics through our own passion for the subject and the provision of opportunities to explore, ask and answer questions, play and solve problems. We are committed to high achievement in mathematics regardless of gender, race, class or disability.

The purpose of mathematics at Bowhill is to:

- Master the fundamentals of mathematics, through developing conceptual as well as procedural understanding. Use varied and frequent practice to create fluency and provide increasingly complex problems over time to embed deeper understanding. Recall facts rapidly and accurately; apply knowledge effectively.
- Reason mathematically by following a line of enquiry, making and testing conjectures and generalisations. Develop a line of argument, a proof or a justification using mathematical language, e.g. *I can show that... therefore this means that...*
- Solve problems, both in and outside of the classroom, using skills, knowledge and understanding accurately and appropriately. Ask questions and suggest answers or further lines of enquiry.
- Develop confidence in, and positive attitudes to, mathematics and an awareness of the essential nature of the subject in daily life and the real world.
- Be equipped for the next stage of their education, essentially prepared for secondary mathematics to GCSE when they leave Bowhill.

Implementation:

We teach mathematics daily across the school as well as providing opportunities for mathematics outside of the maths lesson. We include fluency sessions to embed key skills, practise essential procedures and ensure mastery of the fundamentals of number and place-value. Our curriculum is carefully designed to enable pupils to build a deep and robust understanding of mathematics and our number system, and to master the content outlined in age-related national curriculum objectives. We have a clear calculation policy that is consistently used across the school to ensure a deliberate and systematic approach. We have developed well-defined long term planning based on White Rose and use medium and short term plans within our phases to guarantee a consistent and sequenced approach for all pupils. We have high expectations of all children and use flexible grouping and specifically tailored scaffolding to ensure the highest outcomes for all. We use a '*Plan – Teach – Assess*' cycle offering catch-up and pre-teaching opportunities to those in need with the class teacher as well as teacher assistant support. We also use White Rose end of block and term assessments to ensure accurate data across the school and to identify where intervention is required. At Bowhill, 'maths talk' is well established and incorporated in all mathematical work. This

safeguards progression in using and understanding mathematical vocabulary, which is also enhanced through our learning environments and clear, shared learning objectives. We understand that consistency of approach is key to children embedding mathematical knowledge as they progress through the phases and therefore to their success at GCSE. We have a deliberate structured approach to the use of models and images and mathematical language across the school.

EYFS

In the early years we provide planned and developed opportunities for all pupils to explore mathematics. This includes through free play and guided activities. Active learning is facilitated by means of adult-supported exploration and small or large group structured activities designed to generate critical thinking. Children have daily opportunities to count, use and manipulate numbers in everyday contexts and solve simple calculation problems using tailored concrete apparatus. Mathematical contexts, including counting, conservation of number, number properties, subitising, addition and subtraction, partitioning numbers, counting on and back, and others, are provided to ensure that strong foundations are laid for mathematical progress in Y1 and beyond. In addition, children compare items and quantities, measure using non-standard and handle-able standard units, and draw, describe and classify shapes. The mathematics of children's everyday lives, including time and money, are elucidated in the classroom context, so that children are able to make the mathematical connections required between their activities in school and experiences at home.

Impact

The maths co-ordinator monitors the subject to ensure our intended policies are being successfully implemented in all phases and that pupils are reaching age-related expectations in all years. We take the role of the maths co-ordinator as encompassing:

Achieving Desired Outcomes	Monitoring Progress
1. All pupils are receiving the highest quality teaching in mathematics and that they therefore reach their full potential in terms of achievement in the subject.	On-going monitoring including drop-in observations followed by discussion, book looks, and pupil conferencing. Monitoring available data.
2. Design and implement an appropriate curriculum, with a clear calculation strategy, to deliver National Curriculum content and achieve mastery of set objectives. Continuously monitor the school curriculum to check its strengths and identify any weaknesses needing to be addressed.	Monitor the delivery of the school curriculum and check for consistency, coverage and rigour through planning meetings, discussions with phase leaders and pupil book surveys.
3. Provide purposeful and up-to-date materials and assessments, and ensure that teachers' own assessments are fit for purpose and accurate.	Looking at consistency in teachers' judgements by comparing within and across phases. Continuous monitoring of results and year/class based data.
4. Support colleagues by providing tailored CPD including subject knowledge and advice as required by individual teachers. Arrange and/or deliver suitable INSET for the whole staff, relevant to everyone and addressing the school's needs and SIP.	Keep up to date with recent developments in mathematics education, including current research and examples of excellent practice, locally, nationally and globally. Attending Training sessions as often as possible, reading in educational and mathematical press.