

Mathematics Vision Statement

Brookfield Primary School – Be the best you can be!



“Without mathematics, there’s nothing you can do. Everything around you is mathematics.
Everything around you is numbers.”

Shakuntala Devi, Indian writer and mental calculator

Intent

At Brookfield Primary School we know that the basic skills of mathematics are vital for the life opportunities of our children. Our aim is for all of our children to think mathematically, enable them to reason, solve problems and to confidently use mathematical language. We want our children to be able to recognise the importance of maths in everyday life, in science and technology, financial literacy and employment and to use their mathematical skills in a range of everyday contexts. We set high expectations of our children in each and every lesson and believe that they are all excellent mathematicians!

Aims

At Brookfield Primary School, we aim to:

- Implement the current legal requirements of the Early Years Foundation Stage (EYFS) and the National Curriculum
- To foster positive attitudes, fascination and excitement of discovery through the teaching and learning of mathematical concepts
 - Ensure that our pupils become fluent in the fundamentals of mathematics, developing conceptual knowledge and the ability to recall and apply knowledge rapidly and accurately
- Develop our children so that they have a ‘can do’ attitude and perceive themselves as mathematicians
- Broaden children’s knowledge and understanding of how mathematics is used in the wider world
- Ensure our children use and understand mathematical language and recognise its importance as a language for communication and thinking

Implementation

Maths Mastery

Our mastery curriculum, for maths, has been developed to ensure every child can achieve excellence in mathematics. Children can experience a sense of awe and wonder as they solve a problem for the first time, discover different solutions and make links between different areas of mathematics. It provides pupils with a deep understanding of the subject through a concrete, pictorial and abstract approach. This ensures pupils fully understand what they are learning.

Key features of our mastery curriculum:

- High expectations for every child
 - Fewer topics, greater depth
- Number sense and place value come first
- Focus on mathematical thinking and language
- Manipulatives and resources to support learning
 - Calculating with confidence
 - Understanding 'why'

Our approach places emphasis on the cumulative mastery of essential knowledge and skills in mathematics. It embeds a deeper understanding of maths by utilising a concrete, pictorial and abstract approach so that pupils understand what they are doing rather than simply learning to repeat without grasping what is happening.

Organisation of teaching and learning

During a sequence of learning, our children will be provided with opportunities for mathematical discussion, varied fluency tasks, reasoning and problems solving tasks and opportunities to work independently and within pairs and groups.

Early Years Foundation Stage

In the Early Years Foundation Stage (EYFS), teaching is planned through adult supported teaching and learning following the EYFS framework. Continuous provision inside and outside provides daily opportunities to informally develop mathematical understanding through child-initiated activities and routines are capitalised on.

Key Stage 1 and Key Stage 2

In Key Stage 1 (KS1) and Key Stage 2 (KS2), teaching follows the National Curriculum which is supported by the White Rose Maths Hub materials which ensures clear progression across the year groups. This involves daily maths lessons of 1 hour and same day intervention if required.

Planning

At Brookfield Primary School, we use materials from The White Rose Maths Hub to support our planning. Long term plans map out the units to be covered each term, during each year group. Medium term plans identify learning objectives and outcomes for each unit as well as indicating the skills being taught. Short term plans, prepared by individual teachers, highlight the skills and objectives of the lesson, identify resources and manipulatives that will be used to support learning and show how all of the children will succeed. They also indicate key vocabulary that will be promoted (and displayed within the classroom) and key questions that will be asked.

Resources

- Each class has a range of resources to support learning. These are easily accessible for the children to promote independence
- The White Rose Maths Hub resources are easily accessible and provide the children with a range of questions covering varied fluency, problem solving and reasoning
 - NCETM 'Number Sense' for EYFS, Year 1 and Year 2
- A range of ICT software to support learning in specific areas, including TT Rock Stars can be used at home
 - Environments have been designed to support and enhance learning

Times Tables

Effective understanding and recall of times tables is the foundation of most of the mathematics children will do at primary school and the mathematics curriculum involves children being fluent in number skills. When learning times tables at Brookfield, the children learn inverse operations, a range of representations and problem solving-all of which are vital skills in mathematics.

Assessment

At Brookfield, our assessments in maths are continuous. From the beginning of every lesson, teachers and teaching assistants will be assessing what their pupils are or are not understanding and use this to scaffold each segment of the lesson. During the lesson, misconceptions are dealt with immediately and **all** pupils are challenged. Same day

interventions are in place to support those children who have not grasped a concept within the lesson.

Early Years Foundation Stage

- As in KS1 and KS2, formative assessment is used in the EYFS continuously to inform practitioners of next steps in learning and to determine the progress made.
- Summative assessments are made either termly or half termly to monitor children's learning and understanding
- O Track is used daily to assess children both formatively and summatively – this is done through short observations by practitioners
- Progress of all pupils is discussed at termly 'Pupil Progress Meetings' and focus children are identified and intervention put in place to support these children

KS1 and KS2

- In daily maths lessons, formative assessments are made on a day-to-day basis. Practitioners observe, question and evaluate lesson outcomes to further determine progress made and the next steps in learning
- Summative assessments are made at the end of each topic and term to monitor children's knowledge and understanding of concepts taught. White Rose Maths Hub assessments are used in all year groups from 1-6.
- Both formative and summative assessments are used to inform our online assessment system: O Track
- Progress of all pupils is discussed at termly 'Pupil Progress Meetings' and focus children are identified and intervention put in place to support these children
 - Statutory assessments are made at the end of each key stage

Monitoring Procedures

The head teacher and maths subject leader play a central role in the monitoring and evaluation of the quality of teaching and learning of mathematics at Brookfield Primary School.

Monitoring Strategies

- 'Book Looks' conducted termly
 - Lesson Visits
 - Pupil voice
- Pupil progress meetings held termly

Impact

By the time our children leave Brookfield Primary School we want them confident and fluent in the fundamentals of mathematics with a conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They should have the skills to solve problems by applying their mathematics to a variety of situations with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios. Children will be able to reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.

High standards at the end of KS2 will be maintained and pupils will be well prepared for the next stage in their education.