Booker Avenue Infant School

'Working together, learning together'

Maths Policy

1. Introduction

At Booker Avenue Infant School, we believe it is vital that we ensure all children share a passion and enjoyment for Maths. We believe that all of our children should, and can, achieve their full potential. We aim to develop engaged, motivated and curious minds encouraging pupils to become confident and capable in their Maths abilities, in order to solve problems, reason, think logically and to work systematically and accurately.

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 the power of Mathematics, and a sense of enjoyment and curiosity about the subject. (National Curriculum 2014)

As outlined in the above statement, Maths plays a key role in everyday society and at Booker Avenue Infant School, we acknowledge that Maths is something that pervades everyday life, therefore it is crucial that children have opportunities to learn these vital skills in order to apply them and make better sense of the world around them. We believe it is vital that children in EYFS and KS1 have plentiful opportunities to explore mathematical concepts in a variety of different ways, in order to ensure firm foundations on which children can build and test their knowledge.

We also believe that children need to see the value of Maths and its relevance, therefore opportunities to teach Maths within a real-life context are important to help children make links between their learning and the need for these skills in their everyday life. As well as skills within Maths, we encourage children to develop skills of perseverance and resilience by acknowledging that we may not always correctly solve problems on our first attempt, highlighting the importance of being able to check and critically analyse our methods.

The National Curriculum 2014 sets out year-by-year programmes of study for Key Stages 1 and 2. This ensures continuity and progression in the teaching of Mathematics.

The aims of the 2014 National Curriculum are for our pupils to:

- Become fluent in the fundamentals of mathematics through varied and frequent practice with complexity increasing over time.
- Develop conceptual understanding and ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically; by following a line of enquiry, conjecture relationships and generalisations.
- Develop an argument, justification and proof by using mathematical language.
- Problem solve by applying knowledge to a variety of routine and non-routine problems. Breaking down problems into simpler steps and persevering in answering.

The EYFS Framework sets the standards for the learning, development and care of all children from birth to five years old, and supports an integrated approach to early learning. To support this framework, we choose to use the Development Matters 2021 guidance, in which the main aim is to develop *'a strong grounding in number'*. This supports the Government's continued commitment to strengthen the teaching of early mathematics, so that all children, particularly those from disadvantaged backgrounds, are able to start Year One with a strong and confident foundation in number, providing them with the necessary building blocks to excel in Maths.

The EYFS Framework in relation to Mathematics, aims for our pupils to:

- Count confidently and develop a deep understanding in numbers to 10.
- Automatically recall number bonds to 5, and then to 10, including the composition of each number, and later subtraction and number bond facts.
- Recognise the relationship between numbers, and the patterns within those numbers.
- Explore and represent patterns within numbers up to 10, including odds and evens, and how quantities can be distributed evenly.

2. Breadth of Study

Careful planning and preparation ensures that throughout out the school, children engage in:

- Practical activities and games using a variety of resources.
- Problem solving to challenge thinking.
- Individual, paired, group and whole class learning and discussions.
- Purposeful practise where time is given to apply their learning.
- Open and closed tasks.
- A range of methods of calculation e.g. mental, pencil and paper.

3. Approach

EYFS and KS1 both follow a mastery curriculum. Maths Masters has mastery at its core. It supports teachers in providing pupils with opportunities to deepen their thinking and understanding to ensure they have 'mastered' that concept within their year group. In EYFS we use the Maths Masters scheme in order to ensure our children begin their journey at Booker Avenue Infant School with the strongest, and most ambitious opportunities possible. Our Maths scheme is used to break down the larger curriculum statements into smaller progressive steps that build upon one another. We believe that our chosen scheme is suitably in place to fit the needs of our learners, instead of making our learners fit the structure of the schemes. Careful planning and consideration has been taken to ensure that our chosen scheme provides suitable stretch, consolidation of concepts, and provides a seamless move from EYFS into KS1, before moving into KS2.

The phrase 'teaching for mastery' describes the elements of classroom practice and school organisation that combine to give pupils the best chances of mastering maths. Achieving mastery means acquiring a solid enough understanding of the Mathematics that's been taught to enable pupils to move on to more advanced material.

4. EYFS

In the Early Years, we ensure all children are exposed to a broad and balanced mathematical curriculum, built with opportunities to develop key skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and the ability to describe shape, spaces and measures. We encourage the use of manipulatives, and believe children will develop a secure base of knowledge and vocabulary from which the foundations of mastery maths are built. Children will develop their understanding through planned, purposeful play, and through a mix of adult-led and child-initiated activity. Cross-curricular links are adopted throughout their learning, to ensure Maths is relevant and meaningful as soon as they begin their journey at Booker Avenue Infants.

EYFS planning is centred around the Maths Masters scheme and delivered as appropriate to children, with thought as to where the children are upon entry to school, and what steps need to be taken. A whole-class taught session takes place daily, focusing on revisiting previously taught concepts, and introducing new content that will be covered during the current week. After these sessions, children have access to continuous provision activities with a mathematics focus, that has been carefully thought out and planned.

The whole EYFS cohort work towards the Early Learning Goals at broadly the same pace, beginning in Nursery. Learning is individualised and tailored to suit the needs, abilities and next steps of every child. Pupils who grasp concepts rapidly will be challenged by having access to higher level questioning to extend their mathematical vocabulary within all areas of provision, whilst those children who are not sufficiently fluent in their understanding, will be given opportunities to further develop this, before moving on.

Children are taught in an initially practical manner, which encourages lots of 'hands-on' and applied learning. To record work, photographs are taken and annotated to explain how the experience has enhanced their learning. Children are also given the opportunity to record work in a more formal approach, when ready. EYFS staff ensure a variety of Maths opportunities and challenges are provided within continuous provision. Children who are not meeting age related expectations are quickly identified and small group, or one to one interventions are put in place, to enable all children to reach their full potential.

5. Key Stage One

In Key Stage One, the Maths Masters scheme is used to support teachers in planning and delivering lessons that meet the year group objectives within the National Curriculum, and to ensure that all content is covered by the end of the academic year. Children in KS1 are taught in a variety of methods to engage all types of learners. When recording work, this is often completed in Maths books, however there is the opportunity for lots of practical learning, and when this takes place, photographs are taken and posted in our class 'Maths Journals'. Lessons are taught with a balance between whole class work, practical tasks and individual practice to encourage mathematical talk, support and independence.

Within Maths Masters, children are exposed to elements of fluency, reasoning and problem solving as the lessons are designed around these three mathematical elements. Regardless of ability, all children will have access to fluency, reasoning and problem solving to keep up, not catch up. In addition, children have opportunities to show greater depth of understanding where challenge is needed.

All classes have high-quality, daily mathematics lessons which are 60 minutes long, with time given for basic skills sessions at the start of every lesson. Mental Maths sessions, are 15 minutes and are introduced to Year 1 during the first half term and carried through into Year 2.

We acknowledge our own teachers' creativity, where resources and activities may be created solely by the teacher, as well as a commitment to practical lessons which allow children to work collaboratively on different concepts.

Teaching Maths in KS1 involves employing a range of mastery approaches that help our children to develop a deep and secure knowledge and understanding, so that by the time they leave the key stage, children will have acquired mastery level of the mathematical facts and concepts they've been exposed to, equipping them to move on confidently and securely to more advanced materials. Mastery teaching ensures high expectations for all pupils, which is a concept we promote daily. Our principal focus of Maths is to ensure pupils develop confidence and mental fluency, which is promoted through understanding from concrete (handling objects, resources and manipulatives), on to pictorial (visual images and representations) and then abstract (symbolic stage with more formal strategies). Through this process, children learn a variety of methods to work with numbers and build understanding.

In each class, children work through the curriculum at the same pace, with ample time and practice in each topic before moving on. The concept of teaching mastery is to ensure that topics are well developed. An idea is well formed, and then reinforced by practice. New knowledge is then used in subsequent lessons so that all ideas build on top of each other and pupils have plenty of opportunities to develop relationships between topics. Ideas are revisited as pupils' progress through the key stage, each time at a higher level.

6. Differentiation

In a mastery approach, differentiation normally occurs in the support and intervention provided to different pupils, not in the topics taught, particularly at earlier stages. The National Curriculum states:

'Children who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.'

There should be no differentiation in content taught, but the questioning and scaffolding individual pupils receive in class as they work through problems will differ, and teachers make these adaptations as they see best. Pupils' difficulties and misconceptions are identified through immediate formative assessment, and addressed with rapid intervention – ideally through

individual or small group support conducted by the class teacher or learning support assistant, usually the same day. Where children are working below their key stage expectations, tasks which are related to the general aspect of teaching, are given and supported.

In KS1, 'keep up' intervention takes place, which seeks to address any minor misconceptions found in current Maths lessons. Its aim is to put a small, but important aspect of learning in place. These interventions are carried out by a member of staff, who discuss which children would benefit from the intervention, and they can be changed or added to on an ad-hoc basis. These interventions work, because our TAs observe good practice in daily Maths lessons, and are able to use this to address misconceptions during interventions, whilst also improving their subject knowledge as well as their pedagogy.

7. Special Educational Needs & Disabilities (SEND)

Daily mathematics lessons are inclusive to pupils with SEND. Where required, children's IEPs incorporate suitable objectives from the National Curriculum for Mathematics or Development Matters, and teachers keep these in mind when planning work. These targets may be worked upon within the lesson, as well as on a 1:1 basis outside the Maths lesson. Maths focused interventions in school helps children with gaps in their learning, and with mathematical understanding. These are delivered, by trained support staff, and are overseen by the SENDCo, Maths Co-ordinator, and class teacher.

A range of inclusion strategies are embedded in practice and teachers are aware of the special education needs of the children in their class, as well as those who have English as an additional language. Although the expectation is that the majority of children will move through the programmes of study at broadly the same pace, the 2014 National Curriculum states:

'Decisions about when to progress should always be based on the security of children's understanding and their readiness to progress to the next stage.'

If a child's needs are best met by following an alternative plan, including coverage of the content from a previous year, this will be overseen by the SENDCo, in collaboration with the class teacher and with the knowledge of the Maths Co-ordinator. Specific arrangements for the provision of children with SEN will be communicated to parents and carers during SEN reviews.

8. Equal Opportunities

Positive attitudes towards Maths are encouraged, so that all children, regardless of race, gender, ability or special needs, including those for whom English is an additional language, develop an enjoyment and confidence with Maths. Our aim is to ensure that everyone makes progress and gains positively from lessons, and that teachers plan inclusive lessons.

9. Assessment and Feedback

Assessment in Maths at Booker Avenue Infant School is based on observation, discussion and product, where appropriate, and will be a continuous process throughout school. Tapestry is used each term to monitor progression. At the end of each Maths block in KS1, children will complete the Maths Masters end of block assessment. This helps staff to identify any gaps,

weaknesses and strengths for each individual child, which, if needed can be addressed before starting the next topic. At the end of each term, assessments are used to provide an indication of the progress that has been made, and data is analysed and used appropriately, which feeds into the whole school assessment and tracking process.

In EYFS, children are assessed using the statutory baseline tool at the start of their journey at school, to inform their next steps of learning. Children's progress is monitored throughout the year, which helps identify and gaps in learning, in order to inform future planning. At the end of the Reception, children are assessed against the Early Learning Goals, and these judgements inform the Early Years Foundation Stage Profile.

Marking of children's work is essential to ensure they make further progress. Work is marked in line with the school marking policy, and verbal feedback is also given throughout the lesson.

10. Resources

All classrooms have a number of mathematical, age appropriate resources. Additional mathematical equipment and resources are stored centrally in resource areas.

Maths displays are visible in each classroom, and they are relevant to each age group. In Key Stage One, maths displays are presented to the pupils as a 'Maths working wall'. Displays are useful, purposeful and effective in promoting children's independence and progress in the subject, whilst being appropriate for each individual class. Displays will show any key vocabulary for each topic taught, as well as examples of any new methods and calculations, challenges and interactive opportunities if applicable.

In EYFS, Maths areas are used to encourage independence, problem solving, and a love for the subject.

11. Cross-Curricular Links

Opportunities to develop secure cross-curricular links between Maths and other areas of the curriculum are constantly taken advantage of, and navigated around our bespoke Literacy-led curriculum. We endeavour to grow 'word-rich' children; therefore constantly and repeatedly using mathematical specific vocabulary at any given opportunity. In EYFS, teachers ensure children learn through a mixture of adult led, and child instilled activities, both inside and outside the classroom. Maths is taught through an integrated approach. In KS1, children will be taught to use correct mathematical language, symbols and vocabulary, and communicate in spoken, pictorial and written form, improving both their Literacy and Speaking & Listening skills. We consistently use the correct mathematical language in order for our pupils to develop the correct use of ambitious vocabulary. When using our high quality literacy texts, we find comprehensive links to Maths, and ensure children are aware, and can use their mathematical knowledge, and vocabulary, when necessary. In Science, children will be taught to use non-standard and standard measurements. Learning how to obtain, present and interpret information allows the children to record the finding of their investigations logically and effectively. There is a natural link to DT when children are measuring, marking out, cutting and shaping a range of materials, and in Art, children will be using pattern, shape, form and

space. With Computing, numerous mathematical games and activities help support and extend the children's work in mathematics. Computing can also be used effectively during data handling activities to help them generate, amend and record their work, and the use of programmable toys and apps provide opportunities for children to explore directional language. Music provides strong links to our young mathematicians, encouraging them to use their knowledge when working with musical notation and beats. In History, children will be taught to place events and objects in chronological order, and in Geography, there is a development of position and movement when looking at maps.

12. Home-School Links

Parent's help and understanding of the Maths that their children are learning is extremely important. A regular newsletter is sent out to keep adults informed with any developments concerning Maths at Booker. Weekly photos are added to each year group's page, often including Maths highlights. In EYFS, information regarding key mathematical concepts is given to parents and carers upon entry to school. In KS1, weekly Maths homework is sent home that is designed to complement their school work. This homework is set online using the 'My Maths' website, which allows staff to see areas of strength, and any potential areas to develop. Progress is reported to parents termly at Parents Evenings, and in the end of year report.

Policy reviewed: July 2025

Date of next review: July 2026