



Curriculum Intent	Maths Intent
<p>Everyone at Brookland Infant and Nursery School recognises that our curriculum has to be broad and balanced, offer children opportunities to grow and make progress from whatever their starting points may be. We believe that childhood should be a happy and investigative time, where curiosity and a thirst for new experiences and knowledge is nurtured. We want our children to develop the necessary skills, knowledge and understanding to think and act in ways that will enable them to engage in the culture in which they live and to understand and appreciate the cultures of others. We believe that learning should be memorable, hands on, active and challenging. We also want to develop children's specific subject knowledge, understanding and skills. We want all our children to become confident and successful lifelong learners.</p> <p>Our curriculum is based upon 4 main principles:</p> <p><b>Creative:</b></p> <ul style="list-style-type: none"><li>• Inclusive, exciting and engaging.</li><li>• Stimulates creative thinking and problem solving.</li><li>• Develops effective communication skills.</li><li>• Discovers, nurtures and celebrates children's talents.</li></ul> <p><b>Ambitious:</b></p> <ul style="list-style-type: none"><li>• Ensures children seek out and enjoy challenges.</li><li>• Teaches resilience and the ability to persevere.</li><li>• Promotes independence and motivation.</li><li>• Develops the ability to self-reflect and know how to move forward.</li><li>• Fosters enthusiasm and a love of learning.</li></ul> <p><b>Curious:</b></p> <ul style="list-style-type: none"><li>• Encourages questions to be asked to extend thinking.</li><li>• Enables ideas and experiences to be connected to help make sense of the world we live in.</li><li>• Supports British Values and our School Values.</li><li>• Practical, memorable and fun.</li></ul> <p><b>Healthy:</b></p> <ul style="list-style-type: none"><li>• Encourages a mentally and physically healthy lifestyle.</li><li>• Nurtures and supports social and emotional development.</li><li>• Encourages collaboration with others.</li></ul>	<p>In Brookland Infant School and Nursery we are committed to the Mastery Maths philosophy that is for all children to develop a secure understanding of mathematical concepts and processes, combined with genuine fluency when completing calculations. We believe that we should never put a ceiling on a child's learning and that every child can succeed with the correct teaching and a 'I can' attitude.</p> <p>Through using White Rose and the NCETM as a guidance, we are giving children the opportunity to explore different methods that will improve their understanding of Maths. These methods are built upon within each unit and will be continually revisited and embedded throughout their time at the school. White Rose teaches and challenges children to use methods in the most appropriate, efficient way and develop their problem solving and reasoning skills.</p> <p>Our intent is to spark curiosity, engage reasoning, secure understanding and deepen maths learning for all. Being creative with maths is essential to developing an enthusiasm and fascination for the subject.</p> <p>The National Curriculum for Maths aims to ensure that all pupils:</p> <ul style="list-style-type: none"><li>• 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.</li><li>• Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language</li><li>• 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.</li></ul>



## Maths Implementation

At Brookland Infant and Nursery school we want to spark curiosity, engage reasoning, secure understanding and deepen maths learning for all.

In Maths, we aim, through creative and inclusive lessons, to create a sense of excitement and curiosity around Mathematics. All teachers ensure children with special educational needs are as carefully planned for and inclusivity is at the heart of what we do. Children are encouraged to make links between what they are learning and the world around them. A high-quality maths education provides a foundation for understanding of the world. Maths is essential to everyday life and necessary in almost all forms of employment. As children at Brookland Infants learn mathematics, they are acquiring fluency in mental methods as well as written methods.

**In EYFS**, children access activities that are maths linked on regular basis as set out in the EYFS Statutory Framework and is supported by Development Matters 2021 and White Rose (Reception). In the Early Years mathematics is interactive, linked to real life and encompasses adult led and child led activities. Children at Brookland Infants understand that mathematics can be found everywhere and in everything. Maths learning is developed through continuous provision. Maths is accessible in all areas within the classroom, both inside and outside, where the children thrive by carrying out challenges set by the teacher.

**In KS1** children have a daily maths lesson. Our Maths lessons follow White Rose overviews that are designed to support a mastery approach to teaching and learning and have been designed to support the aims and objectives of the National Curriculum.

Every lesson includes the following:

- **Coherence** - Connecting new ideas to concepts that have already been understood, and ensuring that, once understood and mastered, new ideas are used again in next steps of learning, all steps being small steps.
- **Representation and Structure** - Representations used in lessons expose the mathematical structure being taught, the aim being that students can do the maths without recourse to the representation.
- **Mathematical Thinking** - If taught ideas are to be understood deeply, they must not merely be passively received but must be worked on by the student: thought about, reasoned with and discussed with others.
- **Fluency** - Quick and efficient recall of facts and procedures and the flexibility to move between different contexts and representations of mathematics.
- **Variation** - Varying the way a concept is initially presented to students, by giving examples that display a concept as well as those that don't display it. Also, carefully varying practice questions so that mechanical repetition is avoided, and thinking is encouraged.



When introducing new concepts, we use the concrete, pictorial, abstract approach in order to embed understanding and build competency.

In Reception and Key Stage 1, in addition to Mathematics lessons, children also take part in 'Number Sense' sessions. Fluency and accuracy of key mathematics skills are developed during these sessions and provide an opportunity to revisit and review previously taught topics and the fundamentals of maths. These short 10 minute sessions are focused on developing children's automatic number fluency skills e.g. one more and one less, 2/5/10 times table, number bonds to 10/20 etc.

Progression in mathematics for all children is essential and so, no matter what their starting point, through accurate assessment, high expectations and quality teaching, children are able to reflect upon and realise their mathematical potential. Children are taught at an early stage that it is ok to make a mistake and that is how we learn. We also adapt a '*teacher do, children do*' method to our teaching. This gives the children the opportunity to put the learning and understanding into practise and embed the concept that is being taught. This helps them know more and remember more.

### Maths Impact

We want our children to leave Brookland Infant and Nursery School with a foundation for understanding the world, the ability to reason mathematically. Our children will become competent and confident mathematicians who have developed a sense of enjoyment and curiosity about the subject.

In Mathematics, our children will:

#### **Creative Learners: *How the children express themselves***

- Express themselves through use of concrete resources.
- Talk about how they have solved problems and calculations.
- Work with partners and in small groups.

#### **Ambitious Learners: *How the children demonstrate positive learning behaviours***

- Be resilient and persevere.
- Reflect on their learning.
- Challenge themselves.
- Know that it is ok to make a mistake and learn from it.

#### **Curious Learners: *What the children learn and how it links to their understanding of their place in the world***

- Calculate efficiently.
- Apply their skills to solve problems.



- Ask questions.
- Reason confidently.
- Answer in full sentences using the correct vocabulary.

**Healthy Learners: *How the children ensure they are ready to learn***

- Be proud of their work.
- Have an “I can” attitude.
- Ask for help if they feel unsure.
- Know which resources to use to best support their learning.
- Be confident to select efficient strategies to support their learning.

**If you were to walk into a Maths lesson at Brookland Infant and Nursery School you would see:**

- Engaged children working with concrete resources.
- Discussion and collaboration as a whole class and with learning partners.
- Children making connections with prior knowledge and using this to deepen their understanding.
- All children using mathematical vocabulary to explain their learning.
- Children challenged through problem solving and reasoning activities.
- ‘The Concrete Pictorial Abstract (CPA) approach being used
- Teachers supporting and challenging learners.
- Resilient children.