



Maths Curriculum Intent

Intent of Mathematics

“Mathematics is the most beautiful and most powerful creation of the human spirit.” Stefan Banach

The intent of our Maths curriculum is that our children are curious about maths, enjoy maths, thrive on challenging teaching and learning and expect to master mathematical skills over time. Growth-mindset is pivotal to Brookland teaching and learning of mathematics and our Brookland Learning Skills of Teamwork, Determination, Quality, Listening and Evaluation are strongly cultivated in this subject. Children are confident, resilient and able to apply their mathematical understanding to broader challenges and across subjects. The Brookland Maths curriculum is crafted collaboratively from the National Curriculum by Brookland teachers, overseen by our subject leader and drawing on a range of quality resources, research and careful evaluation of our children’s achievements, strengths and challenges. Brookland lessons draw on a mastery structure using a range of our own tasks and published resources such as White Rose and NCETM with regular opportunity for deeper and extended problem solving as well as real world experiences. We prioritise bespoke staff training through INSET, coaching, team teaching and collaboration such that all staff gain confidence and skills to support, explore and challenge all children’s progress.

Our mathematics curriculum aims for all our pupils to:

- become fluent in the fundamentals of mathematics, through varied and frequent practice
- solve increasingly complex problems
- have conceptual understanding
- recall and apply their knowledge rapidly and accurately to problems and across the curriculum
- make rich connections between different areas of maths knowledge and beyond to other subjects and life in general
- evaluate their own successes, understanding and next steps in maths within each lesson and over time
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof
- use mathematical language confidently and accurately

The pupils said in a whole school meeting, where pupils express their opinions:

An excellent mathematician knows their multiplication, understands the question, has resilience and patience. They learn from mistakes, check their work and solve it in different ways.

The Implementation

Pupils develop their understanding of new concepts through the use of concrete resources and pictorial representations. Our curriculum is designed into blocks of work and is sequenced carefully to enable pupils to build on prior knowledge. Regular revisiting of key knowledge is interleaved within the units to

support long term memory. Early work also supports secure recall of vocabulary, methods and number facts. Strategies to develop procedural fluency are embedded within the curriculum.

The expectation is that the majority of pupils will move through the curriculum at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils 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. This is based on mathematical 'mastery'. The essential idea behind mastery is that all children need a deep understanding of the mathematics they are learning so that future mathematical learning is built on solid foundations which do not need to be re-taught.

Support for our less fluent mathematicians beyond the taught daily lesson includes research based interventions such as first class at number, rapid catch up daily sessions for those less secure with that day's learning, after school or before school 1 to 1 or group tuition and online 1 to 1 tuition. Home practice of maths includes My Maths and TT rockstars for times tables. Further depth and challenge is provided both in whole class lessons and in extension groups where appropriate.

We have found that using an extension set for year 5 and year 6 enables all pupils to make the best progress and all children benefit from working with different teachers and children once a day. The Brookland Junior Curriculum builds directly on the teaching and learning in our Infant school; we share a common calculation policy. We liaise with a local secondary school to understand the skills progression into KS3 and benefit from their support where we have exceptionally able pupils.

Maths is well resourced to support a concrete, pictorial, abstract approach to acquiring concepts securely and we enjoy learning maths in our outdoor spaces too. We also ensure that our pupils develop their problem solving skills regularly through our mastery- structured lessons and extended investigations.

Impact

How do we know how well our children are learning more and remembering more in Maths during their time at Brookland?

Work is recorded in individual books each day and assessment for learning practice is integral to each lesson, including green pen comments. Identified key skills in the planning are deep marked each term and termly summative judgements made using the statement banks in our tracking package.

Our data tracking shows that Brookland pupils make strong progress in their mathematics from their different starting points. We evaluate progress and attainment thoroughly for all pupil groups and individuals, evaluate any concerns and successfully support and challenge to ensure best possible progress for all. Our end of Key Stage outcomes for progress and attainment are well above national average for all pupil groups and cohorts with 88% of pupils attaining national expectations and 56% working at greater depth in 2019.