



# **Rosehill Junior School**

## Maths Policy

*September 2022*

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This document is a statement of the aims, principles and strategies for the teaching and learning of Mathematics at Rosehill Junior School. Mathematics is a core subject and this policy has been written in accordance with its statutory requirements.

'Mathematics is a creative and highly interconnected discipline ... a high-quality mathematics education should provide a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity.' (National Curriculum for Mathematics, 2014)

### **Statement of Intent**

At Rosehill Junior School, we endeavour to teach maths in a way that allows children to apply their knowledge and skills to a range of practical, real life contexts, ensuring that their learning is both purposeful and meaningful. Skills are linked and taught together to maximise teaching and learning time to give context to learning. From the start of their journey in Key Stage 2, we strive to ensure a focus on developing varied mathematical fluency. As pupils develop confidence in their fluency, we aim for them to begin to reason mathematically thus developing strong problem solving skills and a resilience for solving the most challenging of questions.

The National Curriculum for mathematics aims to ensure that all pupils:

- 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.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.



- 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.

### **Statement of Implementation**

Our long-term plan is based upon the National Curriculum (which can be found here <https://www.gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study>) to ensure that children are constantly exposed to a challenging curriculum. We use White Rose Maths (which can be found here <https://whiterosemaths.com/>) to ensure that learning is sequential with small steps that support children in mastering each mathematical concept. The progression of skills is clear across school so that children are able to build upon solid foundations and create links to their new learning.

We ensure that the three aims of the National Curriculum are addressed weekly: Fluency, Reasoning and Problem Solving.

Fluency is taught regularly across school and forms an integral part of our Maths lessons. Children also have additional opportunities to develop their fluency outside of Maths lessons. Throughout school, children have the opportunity to develop their arithmetic skills and consolidate their knowledge and understanding of number and place value, within focused sessions. This includes the use of Big Maths, Maths Challenges, TTRockstar competitions and arithmetic practice.

As a fundamental aspect of our maths curriculum is reasoning and problem solving, children will be taught the skills that they need allowing them to apply their knowledge to a variety of different contexts. To support them with this, children will need to develop their mathematical thinking and be able to verbalise their thoughts clearly using the correct vocabulary. The use of sentence stems within lessons will ensure that children are able to do this and can fluently explain their thinking.



Resources and manipulatives are used within all year groups and children are moved between concrete, abstract and pictorial representations as they progress through their learning. The use of resources within independent tasks will help to support children to access challenging learning and to deepen their understanding of different concepts. A full range of resources are shown on our Calculation Policy which can be found on our website.

### **Maths in our Lower Key Stage 2 (Years 3 and 4)**

In Years 3 and 4, the focus is to ensure the children become increasingly fluent with whole numbers and the four operations (including number facts and place value). Pupils begin to develop efficient written and mental calculations with increasingly large whole numbers. They begin to develop their ability to solve a range of problems, including simple fractions and decimal place value. The children develop mathematical reasoning to help them analyse shapes and their properties and confidently describe their relationships. All children in school have the opportunity to use equipment and resources as and when needed. By the end of Year 4, children should have memorised their multiplication tables up to and including the 12 times table and be able to show precision and fluency in their work. Pupils in Year 4 are prepared for the Multiplication Tables Check (MTC).

### **Maths in our Upper Key Stage 2 (Years 5 and 6)**

In Years 5 and 6, the focus of Maths is to ensure that children extend their understanding of the number system and place value to include larger integers. Pupils should be able to make connections between multiplication and division with fractions, decimals, percentages and ratios. All children in school have the opportunity to use equipment and resources as and when needed. Children should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems that demand the use of efficient written and mental methods of calculation. Children are introduced to algebra as a means for solving a variety of problems. The children's understanding and knowledge in



geometry and measures consolidates and extends the knowledge they have developed in number; children should be able to classify shapes with increasingly complex geometric properties, using the vocabulary they need to describe them with accuracy and confidence. Our Y6 pupils are prepared for KS2 SATs.

### **Statement of Impact**

The impact of our Maths curriculum is that at the end of Key Stage 2 our pupils achieve and make progress in line with other pupils nationally, evident through:

- Fluency in their recall of key number facts and procedures
- Accuracy in the formal calculation methods for all four operations
- The flexibility and fluidity to move between different contexts and representations of mathematics.
- The ability to recognise relationships and make connections in mathematics
- The confidence and resilience to reason mathematically and solve a range of problems

### **Pupils with SEND**

Children with additional needs are supported by using practical resources and differentiated activities where needed. They are also further supported by additional support staff whenever possible. Where applicable, children's provision maps will incorporate suitable objectives from the KS1 National Curriculum or the EYFS curriculum and teachers keep these objectives in mind when planning work.

### **Assessment**

Within our maths lessons, assessment for learning is continuously taking place to inform lesson planning, lesson delivery and next steps. As part of this, live marking is valued to ensure that children are receiving timely feedback. On the spot feedback and targeted support is given if needed. Children complete the end of block assessments from White Rose Maths and teachers track the data, using it to inform their interventions.



To validate teacher assessments, we use a termly test to obtain a standardised score. This helps us to identify whether pupils are where they should be for that point of the year and if any additional support is required.

Statutory Assessment Tests (SATs) are used for children in 6, plus children in Year 4 are also required to take a multiplication tables check (MTC) in the Summer Term. The purpose of the check is to determine whether pupils can fluently recall their times tables up to 12, which is essential for future success in mathematics.