

Mathematics Policy

Intent:

At Woodston Primary School we want to create:

- confident, skilful mathematicians who can expertly and independently apply their knowledge and understanding.
- individuals who have a life-long love of mathematics.

A high-quality mathematics education provides a foundation for understanding the world and the ability to reason mathematically. This will foster a sense of enjoyment and curiosity about the subject. It enables the opportunity for that 'Eureka' moment, with an appreciation of the beauty and power of mathematics. It is essential to everyday life, opens the doors to science, technology and engineering, and is necessary for all forms of employment.

In conjunction with the aims of the National Curriculum, our mathematics approach builds and develops opportunities for children to:

- 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.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

Implementation:

White Rose:



We use White Rose Maths, a mathematics mastery approach from Year 1 to Year 6. The schemes of learning provide support and guidance for the sequencing of mathematics units and small steps. The teaching PowerPoints and videos are used alongside resources which include varied fluency, problem solving and reasoning questions.

Teachers adapt these resources as necessary in order to meet the needs of their children, ensuring that the prerequisite learning is secure prior to new content.

The expectation is that the majority of pupils will move through the programmes of study 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 the use of rapid interventions, before moving on.

Assessment:

Children's mathematics development is continually assessed through formative assessment strategies such as low stakes quizzes (including Flashback 4- designed by White Rose to support the retention of recent knowledge).

Teachers make a termly judgement on the attainment of every child in mathematics. This is informed by their observations in class, through books and through low-stakes quizzes and tests. In addition, GL assessments are used in Year 2 to Year 6 to gather information at the end of the year.

Key Number Skills:

Secure knowledge of number bonds and times tables is essential. As adults, we use these facts in our day-to-day life and secure knowledge of number bonds and times tables is vital when attempting harder calculations.

At Woodston, we use a programme called Number Sense Maths. This highly visual, research-informed programme provides a structured approach to teaching early number skills and facts that children need to develop fluency. This forms the main structure of the Early Years maths approach ensuring children have a deep understanding of the structures of number and are able to subitise. In Year 1 to 3, Number Sense Maths consists of a daily short session which focuses on exposing children to many representations of number and teaching number bond strategies. This is in addition to their main maths lesson. Number Sense Maths is also used as an intervention in Key Stage 2.

We teach number bonds in a variety of ways so that children are able to represent and use them independently. We show number bonds through concrete and pictorial representations including: numicon, tens frames, dienes, counters, cubes. We encourage children to make the connection between 'fact families' where addition and subtraction number sentences are linked, in addition to connections with similar number bonds to 100.

We teach times tables in a variety of ways. We aim to motivate and inspire the children to learn and practise their times tables through the use of certificates linked to a times table programme. Additionally, the children use TTRockstars, an online platform, where children can practise times tables specifically generated for them.



Impact:

The impact of our mathematics curriculum is that our children become confident and able mathematicians.

The impact is monitored through discussions with children, written work in their books and through teacher assessment. Triangulation of pupils', teachers' and leaders' views ensures the mathematics curriculum is continually reviewed and relevant for the needs of our children.