

National Curriculum Aims	National Curriculum Purpose
<ul style="list-style-type: none"> • 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. • Pupils can reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language • Pupils 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. 	<p>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 power of mathematics, and a sense of enjoyment and curiosity about the subject.</p>

Intent	Implementation	Impact
<p>The mathematics curriculum is planned in a sequenced way to build knowledge, skills, understanding and mathematical vocabulary from Early Years to Year 6.</p> <p>The mathematics curriculum will follow a mastery approach and equip children with a deep and embedded understanding of mathematical components. The five ‘ingredients’ of mastery are:</p> <ul style="list-style-type: none"> • Small steps • Variation • Mathematical thinking • Fluency • Representation and structure. <p>The school’s Calculations Policy provides a guide to how calculations using the four rules of number should be taught within each group.</p>	<p>Teachers plan using a units approach as the basis for their long term planning, ensuring sequences of units build on prior knowledge, using the mastery approach of small steps. This ensures consistency across the school.</p> <p>Teachers plan lessons to create deeper understanding rather than accelerate children to new content. This is done through providing children with a range of problem solving and reasoning tasks to do. Concrete, visual and abstract resources will support children’s learning ensuring components are embedded. Variation will be planned into the lessons to develop children’s confidence when reasoning.</p> <p>Teaching of calculations will be consistent and progressive so that children build each year on a secure base.</p>	<p>The impact of the planning of teaching and learning will be measured through a range of assessment and observational tools which includes:</p> <ul style="list-style-type: none"> • On-going teacher assessment (AFL) • Termly standardised tests • End of Key Stage assessments • Multiplication Tables Checking Exercise (Year 4)

Knowledge & Enquiry

Knowledge and enquiry in maths are divided into distinct areas and children need to be able to move fluidly between these and be able to make connections when solving sophisticated problems.

These areas are:

- Number
- Measurement
- Geometry
- Statistics

In early years foundation stage are:

- Number
- Shape, Space and Measure

Children need substantive knowledge such as knowing their number bonds and multiplication facts in order to be able to successfully tackle more challenging concepts and ideas. Deliberate repeated practice helps children to build confidence, fluency and efficiency in order to secure this substantive knowledge into their long-term memories. Children are also taught to make links across different mathematical components to build this substantive knowledge in their long term memory. Our school follows a mastery approach and the use of Maths No Problem as a basis for sequencing units to ensure continuity and progression and as a way of ensuring children are able to build this substantive knowledge.

Creativity

Creativity is a strong thread that permeates our mathematics curriculum. Opportunities for children to approach mathematics in different ways and to solve problems are carefully planned into each unit of work. Mathematics problem solving is a creative process and children are encouraged to show their thinking and mistakes are embraced as a part of the problem solving journey. By using this approach, children become empowered and they learn what can be possible with a strong mathematical understanding. Mathematical creativity allows children the opportunity for collaborative learning and communication through carefully planned learning activities. Children can investigate, pose questions and become creative decision makers and mathematical risk takers in an environment where it is ok to make mistakes, developing resilience and confidence.

Assessment

Tracking children's progress throughout their school life is vital in order to establish their acquisition of knowledge and skills. At Pinner Park Primary School, learning always starts with the children's prior knowledge and any misconceptions they may have. Class teachers decide upon the most appropriate age related way of obtaining the children's prior knowledge. Units of work are then personalised to the children. Misconceptions that arise throughout the unit are identified and addressed appropriately by the teacher. In Early Years, assessment happens continually to collect consistent and varied evidence of mastery. This then feeds into the continuous cycle of Observation, Assessment and Planning. In addition, each half term every child is assessed on Number recognition and formation 1- 20, Rote Counting to 20 and Number Formation. Summative assessment will be in the form of termly NFER tests. These allow teachers to compare children with national expectations. They will also allow teachers to make adjustments to their provision where needed on a termly basis.