



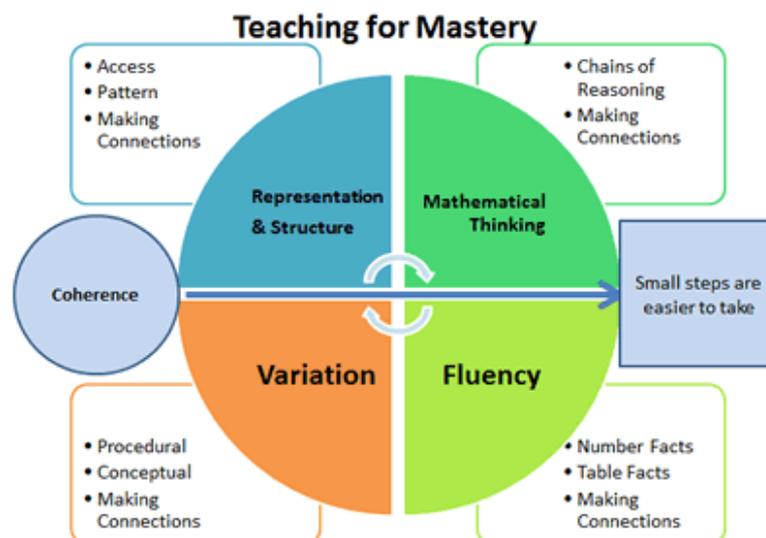
Intent

At St. Paul's our curriculum is designed in such a way to develop our pupil's curiosity, excitement and fascination for Mathematics. It is our intent that our pupils will learn through a small step approach. This will enable them to become confident mathematicians who are fluent in the fundamentals of Mathematics and can confidently use mathematical vocabulary to reason and apply transferable skills across the curriculum. We ensure our pupils get the opportunities to practice, recap and apply their mathematical learning to ensure their learning 'sticks' and is transferred to their long-term memory. The children build on their prior knowledge and apply previous learning in order to learn new concepts while deepening their understanding of mathematics. We encourage resilience, adaptability and acceptance that struggle is often a necessary step in learning. Our curriculum allows children to better make sense of the world around them relating the pattern between mathematics and everyday life. It is important to us that our pupil's will leave St. Paul's ready for the next stage in their life and for the challenges ahead.

Implementation

Mathematics throughout the school combines the best of a mastery approach with a spiral curriculum to ensure there is a clear progression of skills within the children's learning. Our curriculum follows many of the mastery principles – spending longer on topics to help gain deeper understanding, making connections, keeping the class working together on the same topic and a fundamental belief that, through effort, all pupils are capable of understanding, doing and improving at mathematics. But we also recognise that just spending a good proportion of time on a topic does not mean that all pupils will 'master' it initially, and that they need to see it again and again in different contexts and in different academic years to help them truly develop their understanding on their journey to mastery, so we have built in the revisiting and reinforcing features of a spiral curriculum too.

We are committed to providing our children with a Mathematics curriculum that reflects on and takes into account the latest available research evidence and recommendations in order for our pupils to achieve the best possible learning outcomes. Our Mathematics curriculum is based around the NCETM's 5 key mastery principles that are outlined below:



Coherence

Our lessons are broken down into small, connected steps that gradually unfold the concept, providing access for all children and leading to a generalisation of the concept and the ability to apply the concept to a range of contexts.

Representation and Structure

Representations are used in lessons to expose the mathematical structure being taught, the aim being that pupils can do the maths without recourse to the representation.

Mathematical Thinking

The mathematical ideas that are taught need to be understood deeply, therefore we ensure they are worked on by the pupils: thought about, reasoned with and discussed with others.

Fluency

We develop number sense so that the pupils can decide on the most appropriate method for the task at hand; to be able to apply a skill to multiple contexts. They are supported to develop quick and efficient recall of facts and procedures.

Variation

Teachers will use both conceptual variation and procedural variation to help develop a deep understanding of a concept. They will represent the concept being taught, often in more than one way, to draw attention to critical aspects, and to develop deep and holistic understanding. Pupils will learn to recognise what is kept the same and what changes, to connect the mathematics and draw attention to mathematical relationships and structure.

We implement our approach through quality first teaching, delivering appropriately challenging work for all individuals. To support us, we have a range of mathematical resources in classrooms including Numicon, Base10 and counters (concrete equipment). When children have grasped a concept using concrete equipment, images and diagrams are used (pictorial) prior to moving to abstract questions. Abstract mathematics relies on the children understanding a concept thoroughly and being able to use their knowledge and understanding to answer and solve mathematics without equipment or images.

We create a vocabulary rich environment, where talk for mathematics is a key learning tool for all pupils. Pre-teaching key vocabulary is a driver for pupil understanding and develops the confidence of pupils to explain mathematically.

Within lessons, children have time to explore possible misconceptions and these are used as a teaching point so that they can be swiftly addressed. Some children may be part of a pre-teach group that will help them feel more confident when approaching a new concept in whole class teaching. If children are finding a concept challenging, this will be addressed through intervention as soon as viably possible.

To consolidate previous learning and keep rapid mental recall, each child from EYFS to Y6 will work on mental mathematics skills and number fluency outside of the timetabled Mathematics lessons. All children have access to online resources to support their mental arithmetic and fluency of number facts at home.

Impact

- Pupils will be able to represent a concept in multiple ways, use the sufficient mathematical language to communicate related ideas and can independently apply the concept to new problems in unfamiliar situations.
- Pupils will have a positive mindset for mathematics and strong subject knowledge so that they can be successful in Mathematics and use this in real life situations.
- Demonstrate a 'can do' attitude to mathematics tasks.
- Through discussion and feedback, children talk enthusiastically about their maths lessons and speak about how they love learning about maths. They can articulate the context in which mathematics is being taught and relate this to real life purposes.
- Pupil's use acquired vocabulary in maths lessons. They have the skills to use methods independently and show resilience when tackling problems.