



Mathematics at William Rhodes Intent Statement

At William Rhodes Primary School, we recognise that Maths is a skill we use on a daily basis and is an essential part of everyday life. Mathematics forms an important part of our broad and balanced curriculum where we ensure children develop an enjoyment and enthusiasm for maths that will stay with them throughout their lives and empower them in future life.

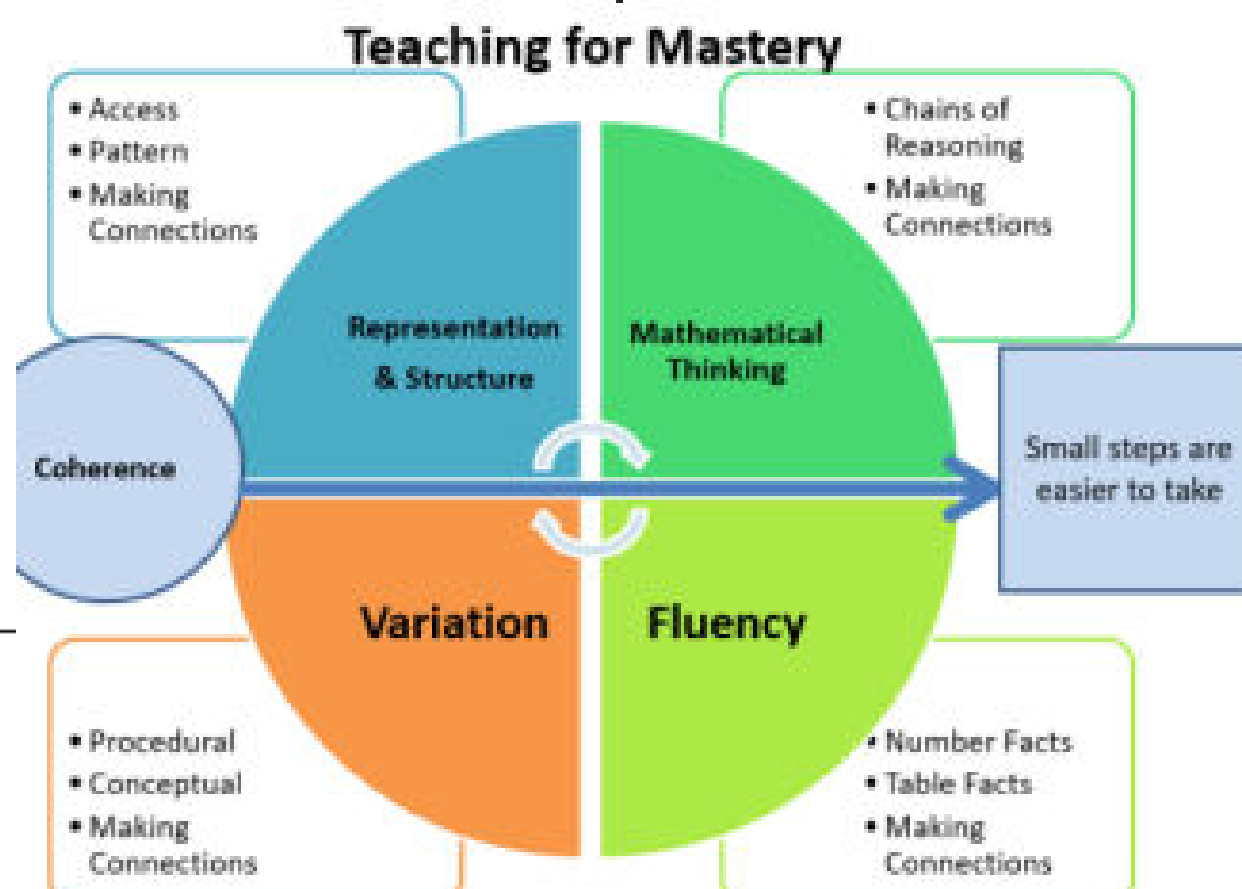
We believe that unlocking mathematical fluency is an essential life skill for all learners and is a pre-requisite to being able to reason and solve problems mathematically. Our aim is to develop a positive culture of deep understanding, confidence and competence in maths that produces strong, secure learning.

As a school, we recognise the key to unlocking the potential in our children is through the development of basic mathematical skills and the understanding of mathematical concepts. We place great emphasis on the use of concrete resources and pictorial representations at all ages, to enable children to fully understand the concepts and principals, when presented with abstract calculations and questions.

Our maths curriculum is progressive; at KS2 it is designed to develop competencies to equip pupils for KS3 where they will build on KS2, make connections and solve increasingly complex problems.

Learning is tailored around the 5 Big Ideas of Teaching for Mastery:

| Small coherent steps | Making connections | Fluency | Representations | Variation |
|--|--|--|---|---|
| In order to allow all children to achieve, scaffolding is necessary. All children are able to engage with the lesson as small steps are carefully engineered to guide them through their learning, leading them to conclusions and generalisations which, through careful teacher-led questioning and lesson design, they discover for themselves. | Units of learning are built upon prior learning and connections are made throughout the learning journey. Longer time is spent on each mathematical concept so that there is time for depth of understanding and children are able to make their own generalisations as well as reasoning about their maths and using their knowledge and understanding to solve problems. | Children are taught key number facts, which they practise and apply within a wide range of contexts. | Children are exposed to a wide range of representations, following a concrete, pictorial, abstract approach so that all learners are able to visualise the structures of mathematics to support their learning. | Lessons include both conceptual variation, where concepts are shown in a variety of ways, as well as procedural variation throughout a lesson or exercise in which children are encouraged to apply their knowledge and make connections to proceed through a task. |

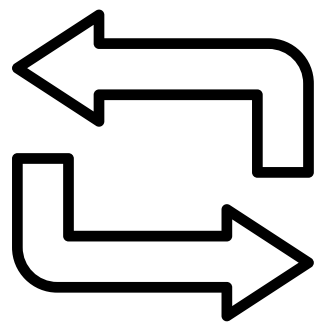


Our EYFS staff lay the foundations of mathematical understanding as children are exposed to counting and are taught to subitise in a variety of contexts. Number songs and rhymes are embedded daily. Children begin to develop their understanding of numbers 1 to 5 and begin to use mathematical vocabulary to compare amounts or objects. Children are introduced to pattern and shape and develop their ability to recognise and replicate these in their play and exploration. Problem solving is entwined throughout the children's mathematical experiences: they begin to solve real life problems involving numbers up to 5.

This knowledge is built upon when the children move into our reception class. Here, they extend their counting and number recognition beyond 10: counting objects and sounds, subitising to 5 and placing numbers from 1-20 in the correct order. Children build upon their pattern spotting, noticing and correcting repeating patterns and beginning to apply this to number, exploring the one more/ one less relationship. Mathematical language is extended further and children begin to explore partitioning and recombining, using concrete equipment: laying the foundations for calculation in subsequent year groups.

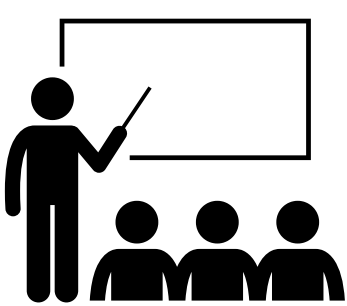
As children move into Year One, their learning is planned in line with the National Curriculum, based upon the NCETM Professional Development materials, which teachers use to design their lesson sequences.

In mathematics lessons across school, teaching will look like:



A recap of prior learning at the start of the lesson

This helps children to make connections and helps to embed the 'sticky' knowledge.



All children to move at broadly the same pace

This provides equity for all. Lessons are engineered to ensure that there are opportunities for all children to access the same learning, at their level, using a range of scaffolds.



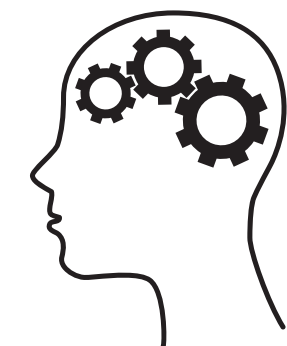
Questioning is considered in lesson design and used throughout the lesson

This can be a scaffolding technique to support learners as well as a way to deepen the understanding of those who have grasped a concept quickly.



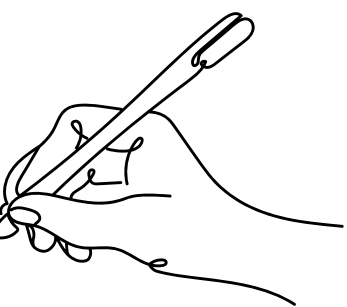
Assessment for learning is ongoing throughout the lesson

Both Teachers and Teaching Assistants will move around the classroom, supporting pupils and intervening at the point of crisis.



Metacognitive talk is used to model reasoning and problem solving strategies

This helps to narrate thought processes, making them explicit to children.



Worked examples are modelled

These will later be used as a support structure and put on the working wall.