



Ox Close Federation

Maths Policy

Approved	October 2023
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Aims

The National Curriculum states that: "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."

At Ox Close, we aim to:

- Deliver mathematical concepts in a sequence of small steps that builds on prior knowledge and makes learning accessible for all pupils.
- secure children's rapid recall of number facts in order to provide them with the best opportunity to approach more complex mathematical problems.
- Provide regular opportunities for children to look for patterns in numbers and use their knowledge of number facts to prove and justify, using mathematical vocabulary
- Think mathematically and reason about mathematical concepts.
- Challenge children to extend and deepen their understanding of mathematics.
- Ensure children are secure in their understanding of number and number relationships
- Provide children with opportunities for low entry, high ceiling challenges
- Provide children with opportunities to develop their understanding of mathematical concepts through concrete, pictorial and abstract resources.
- Create a sense of awe and wonder through maths
- Create a secure, stimulating and challenging environment where children feel they are all capable of achieving in mathematics.
- Provide regular opportunities for children to discuss their understanding and reason about concepts, using mathematical vocabulary.

Our Vision

Ox Close Federation's policy has been developed on the basis of the National Curriculum for England.

This policy is written with consideration to our school commitment to the rights of a child as outlined in the Unicef convention of rights for children. Although direct reference to this is not continuously made, the policy has been written with full awareness of our responsibility as duty bearers and commitment to this purpose. The National Curriculum provides a framework for mathematics but the school is aware of the need for flexibility and creativity in teaching and learning styles in response to the needs of individual children.

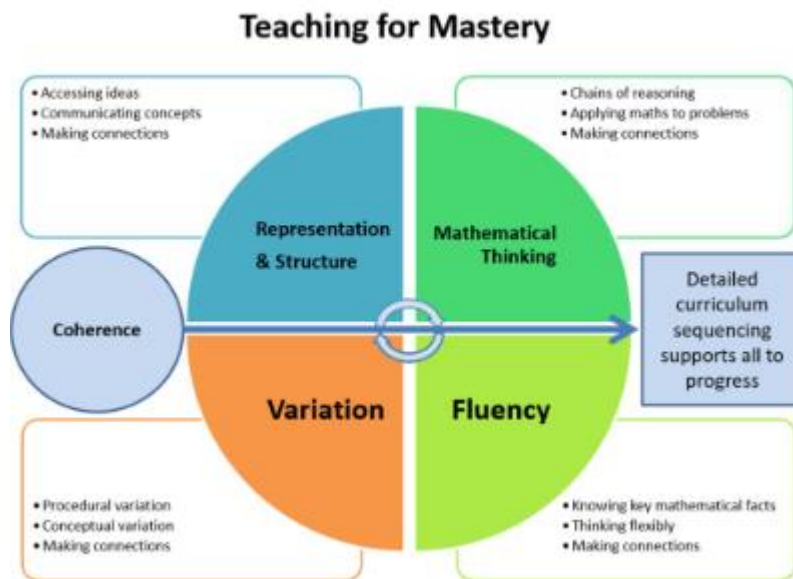
This policy needs to be read alongside the marking policy.

Statement of Intent

At Ox Close Federation we have high expectations and believe that all children have the ability to achieve in maths. We have implemented the 'teaching for mastery' approach which allows the children to develop a deepened understanding of maths through the five key principles of Fluency, Variation, Mathematical Thinking, Coherence, Representation and Structure. Fundamentally, this rests on the belief that all children can and indeed must be successful in the study of Mathematics. Mathematics is for everyone at Ox Close Federation. We value the importance of maths and want children to work collaboratively, independently and show resilience in tackling problem solving across the curriculum, including real life contexts. At Ox Close Federation School we provide 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. This is essential in providing children the building blocks upon which they base their learning. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically and appreciation of the beauty and power of mathematics and a sense of enjoyment and curiosity about a subject.

What is teaching for mastery?



Fluency involves:

- Quick recall of facts and procedures
- The flexibility and fluidity to move between different contexts and representations of mathematics.
- The ability to recognise relationships and make connections in mathematics

Representation and Structure

Mathematical structures are the key patterns and generalisations that underpin sets of numbers – they are the laws and relationships that we want children to spot. Using different representations can help children to 'see' these laws and relationships.

Variation

Procedural variation – This is a deliberate change in the type of examples used and questions set, to draw attention to certain features.

Conceptual variation – When a concept is presented in different ways, to show what a concept is, in all of its different forms.

Mathematical thinking involves:

- Looking for pattern and relationships
- Logical Reasoning
- Making Connections

Coherence

Teachers should develop detailed knowledge of the curriculum in order to break the mathematics down into small steps to develop mastery and address all aspects in a logical progression. This will ensure deep and sustainable learning for all pupils.

As a result of teaching and learning in mathematics, our aim is that pupils will be able to meet the key aims of the National Curriculum for maths.

- In our school we aim to promote children's curiosity and enable them to safely take risks and learn from first-hand experience wherever necessary
- Our primary focus is to support the children to become fluent in mathematical understanding from the most basic level so that they can build upon their own understanding.
- We aim to enable our children to develop conceptual understanding, recall of number facts and patterns and apply their knowledge rapidly and accurately.
- We aim to promote children's ability to reason through opportunities to discuss their thinking and understanding. This emphasis may result in less written work but much deeper understanding.
- We promote problem solving and solution finding. This is not only true in mathematical learning but in almost all aspects of school life.
- We aim to support children to make progress at their own pace. We understand that misconceptions cause greater difficulties at a later stage of learning. We will promote opportunities for children to revisit their thinking during daily recap sessions to ensure they feel secure in their understanding and able to move confidently on to next steps and challenges.

Programme of Study

- Maths will be taught in blocks, following the White Rose small steps.
- Teaching sequences are supported through the use of Ready to Progress materials, which teachers use to assess children's knowledge of key concepts.
- The NCETM spine materials are used to supplement White Rose materials, where teaching sequences need to be broken down into smaller steps of learning.
- Links to long term and medium term plans for all year groups can be found on the website.

Maths in Early Years Foundation Stage

In EYFS, maths follows White Rose objectives which are applied through Birth to Five

Nursery

- Maths sessions delivered to key worker groups
- Maths activities provided through continuous provision
- Mathematical enhancements within continuous provision areas.
- Adult focused activities

Reception

- Daily whole class maths input which builds on small steps of knowledge across the week

- Children access activities in provision that provide opportunities for children to apply the skills they have been taught in whole class teaching.
- Teacher and teaching assistant led tasks
- Children take part in the Mastering Number Programme, which is taught daily each afternoon.

Maths in Key Stage 1 and Key Stage 2.

We follow a 'teaching for mastery' approach to mathematics. Maths lessons are structured in the following ways:

- The majority of the class will be taught together with additional support provided for children who need it, though the use of concrete resources or teaching assistants.
- Learning will be segmented into small steps to ensure that children are secure with each area of learning before moving on to the next.
- Where possible, live marking takes place to ensure that misconceptions are addressed quickly and effectively.
- A recap of prior learning takes place at the beginning of each lesson, in order to ensure children are given opportunities to recall and apply prior learning on a regular basis.
- Learning is supported through the use of a concrete, pictorial and abstract approach
- Effective questioning is carefully used to draw children's attention to patterns and support them in making connections between strands of their learning.
- Choral repetition of stem sentences supports children in using the correct mathematical vocabulary and provides a scaffold upon which they can explain their reasoning.
- Children are encouraged to discuss their mathematical thinking with a partner throughout the lesson, in order for them to articulate their reasoning and share their understanding of a concept.
- Opportunities for problem solving and reasoning are built into daily lessons and are accessible to all pupils.
- Children in Year 1, 2, 4 and 5 take part in the Mastering Number Programme, which is taught outside of the maths lesson on an afternoon.

The role of parents

Details of what your child is learning in maths each half term can be found on our curriculum overviews.

Parents will be given opportunities during parents evening twice a year to look at their child's maths books and discuss their progress with their class teacher.

Parents will be given the opportunity to come in to school for a meeting to discuss the teaching of times tables and how they can support their child at home.

Children will be sent maths homework each week to support their knowledge and recall of mathematical facts that they need to develop a quick recall of.