

Maths at Kingfisher CE Academy



Kingfisher
CE ACADEMY



Intent: What do we want children to learn?

The national curriculum states *'Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas.'* Therefore, the intention for mathematics is to ensure that all pupils become fluent, reason mathematically and solve problems.

At Kingfisher CE Academy, we teach our children how to make sense of the world around them by developing their ability to calculate, reason and solve problems. We want our children to recognise and understand relationships and patterns in numbers in the world around them. We expect Mathematics to be utilised as a tool beyond the daily Mathematics lessons and beyond the classroom.

Intent: Continued



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At Kingfisher CE Academy, we aim for:

- Children to become confident, competent and independent mathematicians
- Build a deep conceptual understanding of mathematics and its interrelated content so that children can apply their learning in different situations
- Develop children's ability to articulate, discuss and explain their thinking using appropriate mathematical vocabulary
- 'Mistake friendly' classrooms where children see mistakes as learning tools - there is an emphasis placed upon developing the power to 'think' rather than just the 'do'
- Instill the mind-set in every child and staff member that everyone can do maths and that maths is for everyone...EVERYONE CAN!
- Children develop into resilient and inquisitive learners - skills needed to become life-long mathematicians
- Deliver an inspiring and engaging mathematics curriculum, taught by highly-enthusiastic staff, which sparks curiosity and excitement and which nurtures confidence in maths.

Implementation: How do we do it at Kingfisher CE Primary Academy?



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To improve our mastery approach and further improve the quality and consistency of our maths teaching, we have implemented three components to all lessons. These include make it, draw it, explain it.

At Kingfisher CE Academy, we recognise the value of making a coherent journey through the national curriculum and each year group follow a medium term plan where small, cumulative steps build a solid foundation of deep mathematical understanding. Formative assessment is threaded throughout each lesson and unit of work; and appropriate revisions to planning are made by the class teacher to ensure all lessons are tailored to best meet the needs of their children.

In order to meet our aims above and the requirements set out in the EYFS framework and the Primary National Curriculum, we will implement the following:

- Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics – EVERYONE CAN! Maths is for EVERYONE!
- Lessons are planned and sequenced so that new knowledge and skills build on what has been taught before.
- To develop secure and deep conceptual understanding, staff plan for the use of concrete resources, varied representations and structures (make it, draw it, explain it).
- The vast majority of children progress through the curriculum content at the same pace
- Regular and ongoing formative assessment informs teaching, as well as intervention, to support and enable the success of each child
- Staff also refer to the Calculation Policy when teaching formal methods, understanding that sometimes children find their own efficient methods along the way.

Implementation: Continued



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- Provision will be made for children who are not making the expected level of progress through POPs and intervention
- Practice and consolidation play a central role. Carefully designed continuous provision in EYFS builds fluency and understanding of underlying mathematical concepts.
- Teachers use precise questioning in class to test conceptual and procedural knowledge and assess children regularly to identify those requiring intervention, so that all children keep up.
- Children's explanations and their proficiency in articulating mathematical reasoning, with the precise use of mathematical vocabulary, are supported with teachers placing a strong emphasis on the correct use of mathematical language.

Concrete - children have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.

Pictorial - children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems.

Abstract - With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

EYFS:

All children in the Foundation Stage have daily opportunities to develop their mathematical understanding, primarily through play, to meet the needs of Development Matters. The 2 strands of Mathematics taught in the EYFs are Numbers and Shape, Space and Measure.

Impact: What is the Impact of our curriculum?



- Children at Kingfisher CE Academy understand and value the importance of mathematics, this is evident through pupil voice and monitoring.
- We want children to be confident in making rich connections across mathematical ideas as a result of developing fluency, mathematical reasoning and competence in solving increasingly sophisticated, contextual problems.
- Through high quality teaching, the children are happy learners who talk enthusiastically about their learning and eager to further their progress.
- The impact of 'mastery' and the emphasis on the accurate use of mathematical language is evident during class/pupil discussions and lesson observations.
- Children's fluency in number is evident in all lessons and this is continuously revisited to support recall.
- More consistent teaching practices are used for more effective and long term pupil progress. This consistent approach is evident from Nursery through to KS2.
- Summative assessment takes place at the end of each term and children's progress and attainment is discussed with senior leaders in pupil progress meetings.
- Formative assessment takes place on a daily basis and teachers adjust planning accordingly to meet the needs of their class.