

Maths Curriculum



Curriculum Vision and Rationale

Mathematics is a subject which underpins children's ability to problem solve and think methodically in their later lives. At Kingsthorpe Grove, our key threshold concepts are: know and use numbers; add and subtract; multiply and divide; use fractions; understanding properties of shapes; describe position, direction and movement. The knowledge associated with these key concepts will be embedded through reasoning and problem solving in all year groups. The milestones allow for progression of skills and children's development over time as well as ensuring teacher's lessons are pitched appropriately and assessment is accurate.

Intent

At Kingsthorpe Grove, our intention is not just on skill development but also the application of these skills in open-ended, challenging problems. We intend to nurture the power of reasoning, critical-thinking, problem-solving and effective communication skills. We recognise that a child's ability to explain how they have worked out a problem is just as valuable, if not more so, than the answer itself. Most importantly, we aim to encourage children's enthusiasm for Mathematics and the understanding of the real-life applications of what they are learning. Children can understand the importance of respecting mistakes as these allow for further learning. Children should leave speaking positively about the subject and should see a place for themselves within the world of Maths and STEM, with many aspiring to follow a STEM career path later in life.

Implementation

Mathematics at Kingsthorpe Grove is designed to build on previous learning by further embedding and deepening prior knowledge and by making links between different areas of the curriculum. There is a focus on metacognitive strategies such as retrieval and revisiting, where teachers plan lessons which recap learning from the prior year before introducing new concepts. Progression maps provide teachers with sequenced steps for every statement in the national curriculum. A range of representations are used (e.g. bar model, part-whole model, etc.) and children are taught a range of methods and procedures to allow for more personalised learning as they can choose the methods which suit them best. Mental maths lessons are taught separately from core maths lessons so that children are taught a range of strategies aside from written methods. This is to ensure children are calculating efficiently and that we are improving their number sense. These methods will be modelled through think aloud strategies.

Impact

If successful, children will understand the relevance and importance of each mathematical concept in relation to the real world. They will know that Maths teaches vital life skills and will feel confident relying on their learning in many areas of their daily life. Children will have a positive view of Maths and will be able to speak well about their own abilities and their enjoyment for the subject. They will also be able to share aspirations they have within the subject and share role models within the world of Maths and STEM. Pupils work demonstrates that Maths is taught at an age appropriate standard across each year group and in-line with the milestones, with opportunities planned in for pupils showing a swift understanding or working at greater depth. Work is of high quality and demonstrates pupils are acquiring knowledge, skills and vocabulary in an appropriate sequence and have built on learning that they have already acquired in the school.

EYFS

The delivery of maths can be seen within the environment and through short daily inputs. There is a focus on subitising to build number sense mastery.

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Long Term Curriculum Overview

	Autumn 1			Autumn 2			Spring 1			Spring 2			Summer 1			Summer 2								
YFS	Number action songs Sorting and classifying objects Subitising			Numbers 1-5 Routines, Seasons Repeating patterns Patterns			Number bonds to 5 Numbers 6-10 Days of the week/time One more/one less Comparing numbers Addition			Number bonds to 10. Mass, Length, Capacity 3D shapes Shapes-recognising and properties Combining shapes Subtraction			Patterns Numbers beyond 10 up to 20 Counting patterns Shapes-rotating /Subtraction			Doubling/ Halving/ Sharing Odd/Even numbers Problem solving								
Year 1	Place value (within 10)	Addition & subtraction (within 10)	Consolidation	Place value (within 20)	Addition & subtraction (within 10)	Consolidation	Length and height	Place value (within 50)	FW/ Consolidation	PV (within 50)	Weight and volume	Multiplication and division	Geometry;	Consolidation	Money	Calculation	Fractions	Place value (within 100)	Consolidation	Calculation	Position &	FW/ Consolidation	Time	Consolidation
Year 2	Place value	Addition & subtraction		Multiplication and division	FW/ Consolidation	M & D	Statistics	Consolidation	Calculation	Fractions	Money	Consolidation	Property of shapes	Time	Length and height	Calculation	Position and direction	Consolidate/ SATs/evidence	FW/ Consolidation	Mass, capacity and temperature	Consolidation			
Year 3	Place value	Addition & subtraction		Multiplication and division		Money	Consolidation	Calculation	Length and perimeter	FW/ Consolidation	Length and perimeter	Fractions		Statistics	Calculation	Property of shapes	Mass and capacity	Consolidation	Time	FW/ Consolidation	Time	Consolidation		
Year 4	Place value	Addition & subtraction	Length and perimeter	Multiplication and division		Area	Consolidation	Calculation	Fractions	FW/ Consolidation	Fractions	Decimals	Property of shapes	Calculation	Money	Position and direction	Consolidation	Time	FW/ Consolidation	Statistics	Consolidation			
Year 5	Place value	Addition and subtraction	Multiplication and division	Area and perimeter	Fractions	Fractions	Calculation	FW/ Consolidation	Decimals and percentages	Decimals	Statistics	Year 4 time	Consolidation	Calculation	Converting	Money	Property of shapes	FW/ Consolidation	Position & direction	Volume	Consolidation			
Year 6	Place value	Four operations	Fractions	Decimals	Percentages	Converting units	Position & direction	Calculation	MOCK SATS	Algebra	Area, perimeter and volume	Ratio	Statistics	Properties of shape	Revision	MOCK SATS	Revision	SATS week	Transition					

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