

Mathematics –Educational Programme

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding – such as using manipulatives, including small pebbles and tens frames for organising counting – children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

EYFS LONG TERM MATHS PLAN 2022-23

Number

ELG	Nursery	Reception	Provisions	Link to Yr1
Have a deep understanding of number to 10, including the composition of each number.	Show 'finger numbers to 5'	Explore the composition of numbers to 10	Counting songs	Identify and represent numbers using objects and pictorial representations Read and write numbers from 1 to 20 in numerals
	Link numerals and amounts to 5	Link the numerical symbol with its cardinal number value (numeral – value)	Different representations of numbers	
	Say one number for each item	Count objects, actions and sounds	Counting objects (loose parts etc)	
	Recite numbers past 5			
Subitise (recognise quantities without counting) up to 5	Fast recognition of up to 3 objects (subitise)	Subitise	Hiding and guessing games	Identify and represent numbers using objects and pictorial representations
	Say one number for each item	Count objects, actions and sounds	Dice skills Familiarisation with different number representations e.g. 10's frames	
Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts	Solve real world maths problems with numbers up to 5	Recall number bonds to 10	Mathematical problems Introduction of tens frames and visual representations to support understanding	Represent and use number bonds and related subtraction facts within 20 Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations

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Numerical Patterns

ELG	Nursery	Reception	Provisions	Link to Yr1
Verbally count beyond 20, recognising the pattern of the counting system	Recite numbers past 5	Count beyond 10	Counting games	Count to and across 100
	Extend and create patterns	Continue, copy and recreate patterns	Counting throughout the environment	Count, read and write numbers to 100 in numerals
	Notice and correct errors in patterns		Counting songs	Read and write numbers from 1 to 20 in numerals
Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity	Make comparisons between objects relating to size, weight, length, height and capacity.	Compare numbers	Weighing and measuring stations using real world equipment	Given a number, identify one more and one less
	Compare quantities using vocabulary: more, less, fewer, same	Compare length, weight and capacity	Sand and water play	Compare, describe and solve practical problems for: length, weight and capacity
		Understand the one more/ one less relationship	Real life comparison applications e.g. in the role play area	
Explore and represent patterns within numbers up to 10, including even and odds, double facts and how quantities can be distributed equally	Talk about and identify patterns	Continue to copy and create patterns	Real world mathematical problems	Identify and represent numbers using objects and pictorial representations
	Extend and create patterns		Pattern work with colours and shapes etc	Recognise, find and name a half as one of two equal parts of an object, shape or quantity
	Notice errors in patterns		Number patterns - visual	
	Experiment with symbols and marks as well as numerals	Explore the composition of numbers to 10		
	Solve real world maths problems			

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Shape, Space and Measure

Note: There is no ELG requirement for SSM but it appears elsewhere in Development Matters 2020

Nursery	Reception	Provisions	Link to Yr1
<p>Talk about and explore 2D and 3D shapes using informal mathematical language</p> <p>Select shape appropriately for building or creating pictures and models</p> <p>Combine shapes to make new ones</p>	<p>Select, rotate and manipulate shapes in order to develop spatial reasoning skills</p> <p>Compose and decompose shapes – recognition that a shape can have shapes within it (just like a number)</p>	<p>Construction play</p> <p>Various construction kits to create models, nets, etc</p> <p>Shape activities within the environment e.g. creating art with shapes, printing, junk modelling, painting, etc.</p>	<p>Recognise and name common 2D and 3D shapes</p>
<p>Make comparisons between objects relating to length, size, weight and capacity</p>	<p>Compare length, weight and capacity</p>	<p>Map work (link to UW)</p> <p>Sand and water play with various tools and objects</p>	<p>Compare, describe and solve practical problems for:</p> <p>Length</p> <p>Weight</p> <p>Capacity</p>
<p>Understand position through words alone e.g. under, over, on top of etc. Discuss routes and locations</p>		<p>Stories related to journeys and position e.g. little red riding hood, Rosie's walk etc</p>	