

## **Mathematics**

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, 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.

	Number		Numerical Pattern	<u>Shape</u>	Measure	Pattern
Objectives (Development Matters)	Count objects, actions and sounds. Subitise. Count beyond ten Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0–5 and some to 10. Link the number symbol (numeral) with its cardinal number value.		Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers.	Select, rotate and manipulate shapes to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	Compare length, weight and capacity.	Continue, copy and create repeating patterns.
Early Learning Goals (Assessment)	<ul> <li>*Have a deep understanding of number to 10, including the composition of each number.</li> <li>*Subitise (recognise quantities without counting) up to 5.</li> <li>*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.</li> </ul>		*Verbally count beyond 20, recognising the pattern of the counting system. *Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. *Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.			
	Module 1	Module 2	Module 3	Module 4	Module 5	Module 6
	Composition of numbers to 5. Subitising and noticing. 2D shape How to represent numbers to 5 comparing sizes and amounts- more/ fewer.		Composition of numbers to 10. one more/ one less Subitising Equal and Unequal groups. Combining two groups Comparing height and length Ordering numbers to 10. Exploring 3D shapes. Pattern including number bonds to 10.		Numbers patterns to 20 Subtraction and number sentences Exploring numbers to 20 Odds/ evens Exploring 2d and 3D shapes and how to make new shapes combining them. Counting on Doubling Sharing Problem solving	
Skills	To count up to 10 objects with 1:1 correspondence. To match quantities to numeral up to 5 To begin to recognise numbers automatically on a dice/card to 5.	To find the total of 2 groups of objects. To order numbers to 10. To identify 2D shapes and talk about their properties. To begin to recognise numbers automatically on a dice/card to 5.	To use non-standard units to measure length, weight and capacity. To use money during role play activities to buy items. To begin to explore number bonds to 5. To measure units of time.	To use objects to solve simple addition and subtraction problems. To share objects between a group of people equally. To explore number bonds to 5. To represent numbers to 10 in different ways.	To know that addition and subtraction problems can be solved by counting forwards or backwards on a number line. To use rulers to measure length, scales to measure weight and jugs/containers to measure capacity. To be able to count to 20	To know addition and subtraction problems can be solved by counting forwards or backwards on a number line. To use rulers to measure length, scales to measure weight and jugs/containers to measure capacity. To make observations of and
		To be able to count to 10 independently.		To order numbers to 10	independently.	compare length, weight and capacity.



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Objectives (Development Matters)	Count objects, actions and sounds. Subitise. Count beyond ten Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0–5 and some to 10. Link the number symbol (numeral) with its cardinal number value.		Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers.	Select, rotate and manipulate shapes to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	Compare length, weight and capacity.	Continue, copy and create repeating patterns.
Early Learning Goals (Assessment)	*Have a deep understanding of number to 10, including the composition of each number; - Subitise (recognise quantities without counting) up to 5. *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.		*Verbally count beyond 20, recognising the pattern of the counting system. *Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. *Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.			
	Module 1	Module 2	Module 3	Module 4	Module 5	Module 6
Knowledge	To say the number names to 10 in order. To recognise number to 10. To write numbers to 5, forming them correctly.	To know that addition involves combining two or more groups of objects. To begin to read addition number sentences. To say number names to 10 in order. To know the names of 2D shapes. To know that 2D shapes can have sides and corners. To say the days of the week in order. To say the days of the week in order. To begin to say the months of the year in order. To know that patterns are repeated designs.	To know the names of basic 2D shapes. To know how to combine two smaller amounts to make a larger amount to 10. To know that 2D shapes can have corners and sides. To know that length, capacity and weight can all be measured. To know that money can be used to buy items. To understand and use a range of prepositions in everyday contexts.	To know that addition involves combining two or more groups of objects. To know the names of basic 3D shapes. To read addition number sentences. To know that subtraction involves removing an object from a group. To know the names of some 3D shapes. To know that 3D shapes have faces, vertices and edges. To use a number line to help solve simple addition and subtraction number problems	To know that the word 'more' indicates that the group is getting larger. To know that the word 'less' indicates that a group is getting smaller. To be able to count, order and recognise numbers to 20. To count forwards and backwards to 20. To know that length, weight and capacity can be measured using standard units. To know that halving means splitting a quantity in two and doubling means having two quantities of the same amounts. To be able to count, order and recognise numbers to 20. To know that sharing equally means everyone has the same amount of an object. To know that the long hand represents the minutes and the short hand represents hours.	To know the names of some 3D shapes. To know that 3D shapes can have faces, vertices and edges. To know that addition involves combining groups of objects. To read number addition sentences. To be able to count, order and recognise numbers to 20. To know the difference between odd and even.