

What does Mathematics look like in the Early Years Foundation Stage?



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.

Specific examples of Mathematics at Marsh Green

Three and Four-Year-Olds

Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Show 'finger numbers' up to 5. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than' Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. Combine shapes to make new ones – an arch, a bigger triangle, etc. Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Reception Age

Count objects, actions and sounds. Subitise. Count beyond ten. Compare numbers. Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0–5 and some to 10. 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. Continue, copy and create repeating patterns. Compare length, weight and capacity.

Early Learning Goal

Number - 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.

Numerical Patterns

- 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.

Autumn

Nursery:

Number: Number songs, reciting numbers to 5, 1:1 matching to 5, linking numerals to amounts and number recognition

Calculation: More than

Measure: Size, jigsaws and describing patterns

Reception:

Number: Counting 1:1, Matching numerals to amounts, Subitise (1-5) and ordering numerals (1-10)

Number Patterns: More/less and Addition and Subtraction

Shape, Space and Measure: Height and measures

Power Maths:

Numbers to 3

Numbers to 4

Numbers to 5

Comparing Quantities (identical) and Comparing Quantities (nonidentical)

Comparing numbers within 5

2D and 3D shape

Change within 5

Spring

Nursery:

Number: All About Number (1-5), subitising (1-5) and representing amounts

Calculation: Same As/Fewer Than

Measure: Height, sequencing and 2D shape

Reception

Number: Counting 1-20, recognising numerals to 10 and ordering 1-20

Number Patterns: Number bonds to 5/10

Shape, Space and Measure: Pattern (2/3 part patterns)

Power Maths:

Change withing 5

Number bonds to 5

Numbers to 10

Comparing numbers within 10

Addition to 10

Measure: Length, height and weight

Number bonds to 10

Subtraction

Exploring patterns

Summer

Nursery:

Number: Subitizing 1-5, representing amounts and problem solving numbers 1-5

Calculation: Separating sets

Measure: Pattern, capacity and weight

Reception:

Number: Representing amounts, Problem solving with numbers to 5 and 10

Number Patterns: Counting on and back and doubling and halving

Shape, Space and Measure: Numerical Pattern and different measures: Height, Length and Weight

Power Maths:

Counting on and counting back

Numbers to 20

Numerical patterns Shape – composing and decomposing shapes

Measure volume and capacity

Sorting

Time