

Curriculum Goal: Mathematical Development

We want our children to become confident mathematicians. To enjoy exploring number, shape and space. We want our children to enjoy participating in action number rhymes. We aim for children to confidently understand the numbers 1- 5, with a secure knowledge of counting, cardinality, comparison and composition. We want our children to be able to say and use number words, 1,2,3,4,5. To be able to compare two or more numbers, to understand the 'how manyness' of numbers, to count or subitise to know how many. We want our children to understand that numbers are made up of other numbers, e.g. 3 is made up of 2 and 1.

EDUCATIONAL PROGRAMMES

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 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.

Context

In the Ladywood District, 68.43% of children achieved a GLD in mathematics at the end of the EYFS profile 2019. Literacy & mathematics were the two lowest areas of attainment in the EYFS profile for Ladywood district.

First milestone:

Daisies

Children will explore their physical environment, developing an awareness of shape and space.

Children will be able to navigate around their physical environment safely, demonstrating an awareness of shape and space

children will explore and play freely with a wide range of objects e.g. building blocks, pebbles, cones etc.

Children will join in with simple number songs 1-5; 1,2,3,4,5, five little monkeys, attempting to use their fingers as they join in

Children will know their special number (their age) and begin to recite numerals 1-3

Children will count in everyday contexts e.g. when setting up snack table; sometimes missing numbers

Children will use the language of size and weight in everyday routines e.g. a little milk, a big ball

Children will explore the concept of position through fitting their bodies into spaces e.g. inside, under, behind

Children will use vocabulary linked to time; Good Morning, Good Afternoon, Good Bye.

What does this look like?

Children will begin to engage with mathematical concepts through everyday play and routines, snack time, block play, story time etc.

	<p>Children will explore the nursery environment, indoors and outdoors. Children will follow the routine and rhythm of the day, understanding now and next, sequence of the nursery day.</p>
<p>Second Milestone: Daisies & Rising Three's</p>	<p>Children will build purposefully, indoors and outdoors, with a wide range of selected resources, comparing size, shape, weight and composition</p> <p>Children will join in with a variety of known number songs, joining in with the actions</p> <p>Children will be able to name familiar shapes; circle, square, triangle and use language associated e.g. corner,</p> <p>Children will confidently recognise and recite the numerals 1-3</p> <p>Develop fast recognition of up to 2 objects, without having to count them individually ('subitising').</p> <p>Children will be able to explore and match objects which are the same.</p> <p>Children will understand that collections can be sorted into sets based on attributes such as colour, size or shape.</p> <p>Children will begin to recognise patterns ABABAB</p> <p>Children will begin to compare quantities using language: 'more than', 'fewer than'.</p> <p>Children will show finger numbers up to 3</p>
<p>What does this look like?</p>	<p>Children will become more confident to apply mathematical knowledge and concepts throughout their everyday routines.</p> <p>Children will confidently engage and participate in number songs with increasing accuracy</p> <p>Children will confidently self-register and begin to recognise their personal number</p> <p>Children will be familiar with the twoness of two.</p>
<p>Third Milestone: Sunflowers</p>	<p>Children will;</p> <p>Build with a range of selected resources, indoors and outdoors, comparing sizes and weights</p> <p>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</p> <p>Make comparisons between objects relating to size, length, weight and capacity</p> <p>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'.</p>

	<p>Extend and create ABAB patterns – stick, leaf, stick, leaf. Notice and correct an error in a repeating pattern.</p> <p>Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').</p> <p>Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5.</p> <p>Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').</p> <p>Show 'finger numbers' up to 5.</p> <p>Understand 1:1 correspondence 1-5</p> <p>Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.</p>
<p>What does this look like? Measure...</p>	<p>Throughout the nursery day, children will use mathematical concepts in both adult directed and child initiated learning. Children will self-register, recognise their number on the register, understand and use the language associated with the rhythm of the day. During snack time and dinner time, appropriate language of size and weight will be used; I would like a little, I would like a lot, we need x 4 spoons etc. When accessing all areas of learning, children will apply their mathematical skills and knowledge, e.g. when selecting resources to build or when choosing a material for artwork. Children will confidently use the language of mathematics in their 'everyday activities'. Children will confidently subitise to three, understanding the Threeness of three.</p>
<p>Impact..... Final Milestone: When children leave our nursery school they will be able to;</p> <ul style="list-style-type: none"> • Children will confidently recognise numerals 1-5 • Children will confidently apply 1:1 correspondence 1-5 • Children will understand the fiveness of 5 • Children will develop fast recognition of up to 5 objects, without having to count them individually ('subitising'). • Children will be able to recognise and name familiar shapes; square, triangle, rectangle, circle • Children will know the difference between 2D & 3D shapes • Children will understand sequence of first, then, after, before in context e.g. Forest School, Dinner Time etc. and understand the vocabulary of time e.g. Good Morning, Afternoon, Home time etc. • Children will understand what is in the future and what is in the past • Children will be able to design and continue patterns of up to three sequences e.g.; abc, abc, leaf, stick, stone, leaf, stick, stone • Children will make comparisons between objects relating to size, length, weight and capacity 	