Early Years Maths



Why is Early Maths Important?

'Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically.'

'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.'

- Statutory framework for the EYFS, gov.uk, updated 2023/24

Early Years Statutory Framework (EYFS)

‘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.’

‘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.’

- Statutory framework for the eyfs, gov.uk, updated 2023/24

Early Learning Goals (ELGs)

The framework is split into ELGs which are statements that define the expected level of development in each area of the EYFS.

For maths this is split into:

- Number
- Numerical Patterns

How do we do this?

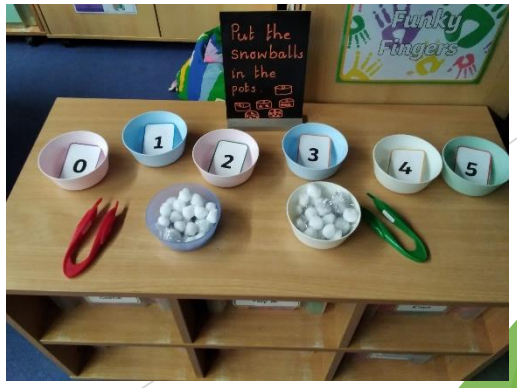
We plan frequent and varied opportunities for the children to explore.

We allow them to develop a secure understanding, knowledge and vocabulary through the use of concrete objects and stem sentences.

We give them the tools and foundations needed for KS1.

We look at each number in depth, using Numberblocks to support learning.





ELG: Number

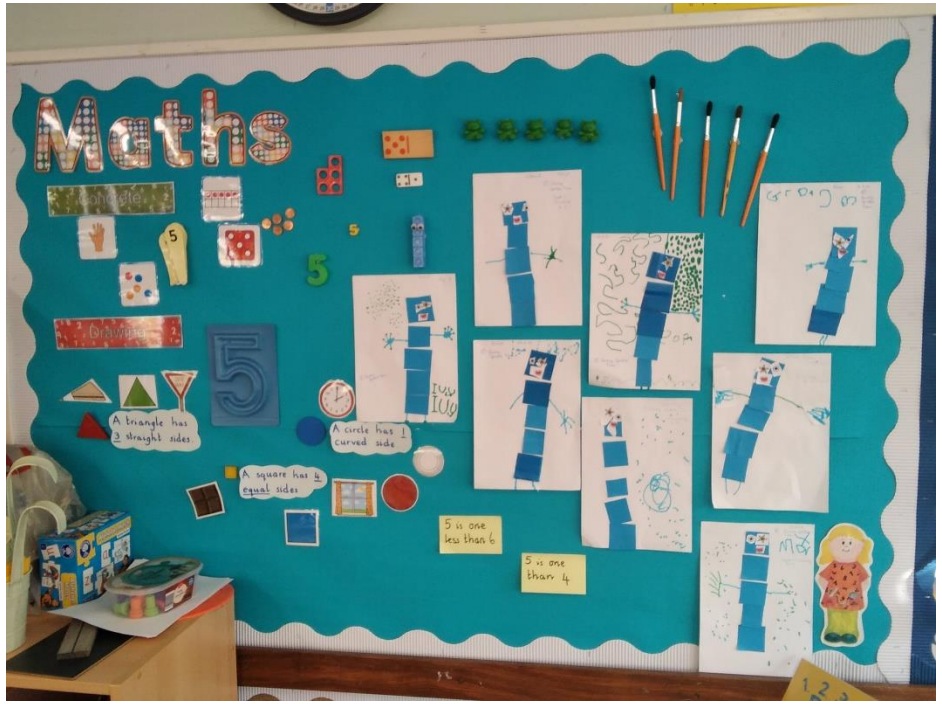
Children at the expected level of development will:

- 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.

Numbers



- Children need to know number names and be secure in recognising numbers to 10 and then beyond
- It is important that they understand and can show one-to-one correspondence when counting an amount
- They need to able to match numerals to the number of objects

Subitising







- Subitising is the ability to instantly recall the number of objects or images without needing to count them individually.
- Subitising can help children to build images for numbers, to visualise and to learn number facts

Number composition/ Number bonds





- Knowing that numbers have a value and can be made in different ways
- Knowing numbers can be made up of two or more other smaller numbers
- Learning to ‘see’a whole number and parts at the same time

ELG: Numerical Patterns

Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system

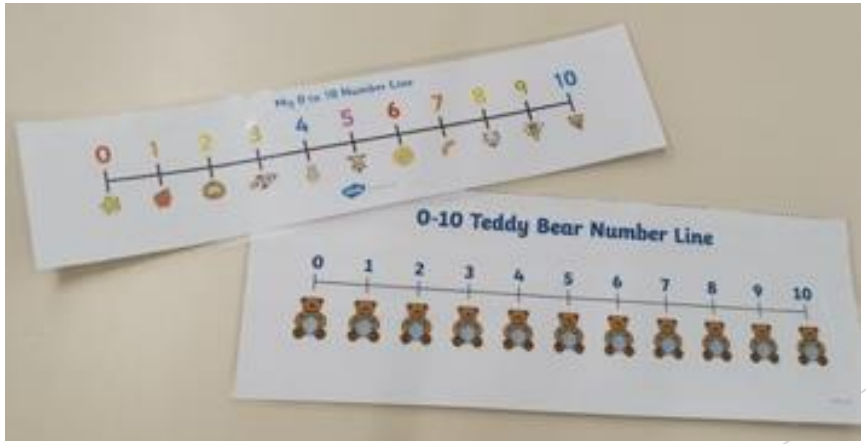
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity

- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Counting to 10 and beyond

- Once children know number names 0-10, they begin extending to larger numbers

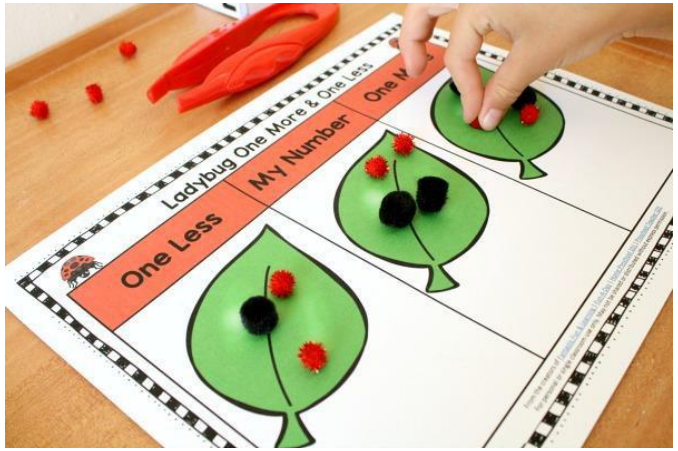
- Being able to count verbally to 20 and then to 30 is important to prepare the children for Year 1



Cardinal Value

- The cardinal value of a number refers to the quantity of things it represents
- Knowing the last number counted gives the total so far

Comparing numbers



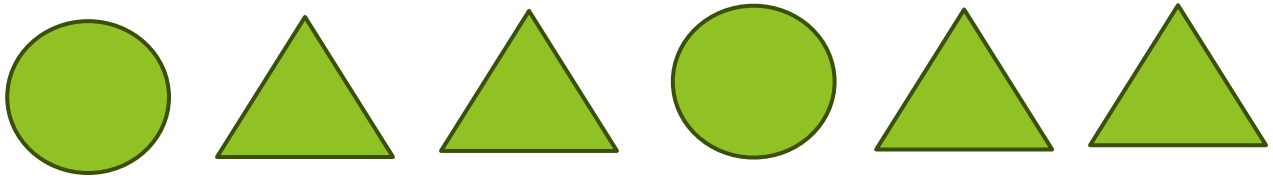
- Comparing numbers involves knowing which numbers are worth more or less than each other
- More than/Less than
- Knowing the ‘one more than/less than’ relationship between sequential numbers

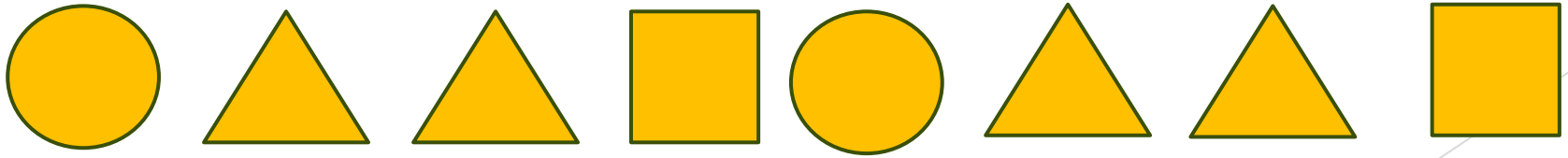
Explore and represent number patterns

- Developing an awareness of pattern helps young children to notice and understand mathematical relationships
- Evens and Odds
- Doubling
- Sharing and grouping

Repeating patterns







- Make patterns with varying rules – e.g. AB, or ABB, ABBC.
- Patterns can be made with objects e.g cubes, small toys, outdoor materials, movements and sounds
- Printed patterns

Shape, space and measures

- Positional language – in, on, under, up, down, across
- Shape properties – describing and comparing 2D and 3D shapes
- Comparing weight, length and capacity e.g ‘shorter’ ‘taller’ ‘long’ ‘full’ ‘empty’ ‘heavy’ ‘light’
- Time – comparing the time it takes to complete activities

Reasoning

Reasoning, by asking the children to explain their ideas, is an important part of development. It helps them to organise their thinking and gives us an insight into their knowledge and understanding of the concepts taught in maths.

We constantly ask the children, ”How do you know?”

Math Sessions – How are they delivered?

- 15-20 Minutes
- Counting – e.g. number songs
- Quick starter game – e.g. subitising, number recognition
- Introduce new learning
- I – Teacher to model first
- We – Teacher to model with the class, with LSA support
- You – Individual work, pairs, small groups, enhanced and continuous provision (Sparkle Time)

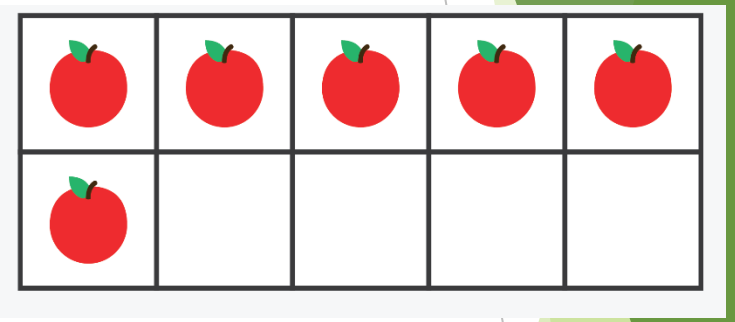
Concrete, Pictorial & Abstract

A Concrete Pictorial Abstract (CPA) approach attempts to help improve the understanding of topics









5+1=6

Common Misconceptions

Counting - Missing out an object or counting an object twice

Saying a teen number instead of a tens number e.g saying, thirteen instead of thirty

Comparing – Children not comparing the quantity within a group of objects but considering the size of the objects

How can you help at home?

- Play games which involve counting, like snakes and ladders
- Sing counting songs
- Looking at numbers in the environment
- Talk to children about groups of everyday objects and talk about how many are in that group- who has more? Who has the bigger group?
- Counting in their everyday routine, how many toys did you tidy away?
- Draw their attention to time, how long will it take for the cake to bake in the oven?
- Encourage activities that develop shape awareness e.g building blocks, shape puzzles etc.
- Play games which involve quickly revealing and hiding numbers of objects. When you play these games, encourage children to keep track of the score using dots, a tally or numeral cards.