Early Mathematics

Developing Number Sense, Subitising and Early Calculations.

Early mathematics develops through practical experiences, conversation, repeated encounters and explicit teaching. Children need to understand quantities and relationships—not simply recite number words or recognise numerals.

What you will see in our EYFS Setting

- Mathematics woven into everyday routines, such as counting, sharing, comparing and noticing patterns.
- Accessible objects children can touch, move, sort, compare and use to represent quantities.





- Opportunities to subitise, count accurately, compare amounts and explore how numbers are composed.
- Shape, space and measure embedded in construction, outdoor play, water, sand and role-play.






- Mathematical vocabulary used meaningfully by adults and visible where it supports play and learning.
- Counters, loose parts, dice, dominoes, ten-frames and objects for sorting and counting.
- Number cards and tracks, bead strings or other consistent representations used in teaching.
- Blocks, puzzles, 2D and 3D shapes, scales, containers, measuring tapes and timers.
- Natural materials and loose parts for creating, copying and extending patterns.





Cardinality and Counting

Understanding that the cardinal value of a number refers to the quantity, or 'howmanyness' of things it represents


Comparison

Understanding that comparing numbers involves knowing which numbers are worth more or less than each other


Composition

Understanding that one number can be made up from (composed from) two or more smaller numbers


Pattern

Looking for and finding patterns helps children notice and understand mathematical relationships

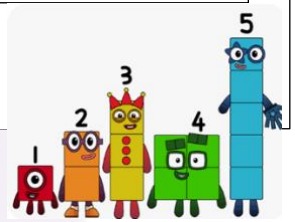

Shape and Space

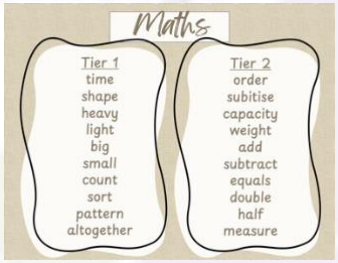
Understanding what happens when shapes move, or combine with other shapes, helps develop wider mathematical thinking

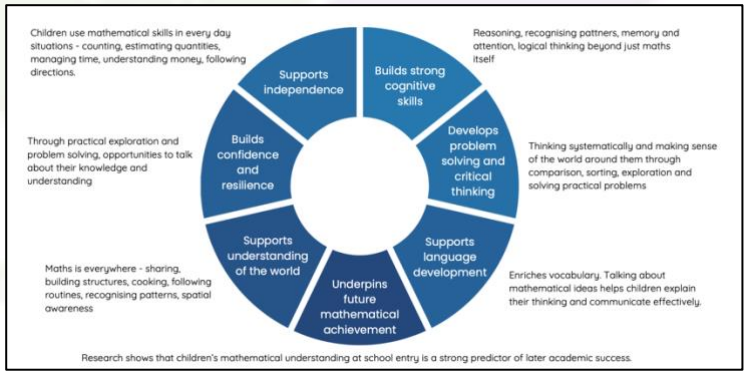

Measures

Comparing different aspects such as length, weight and volume, as a preliminary to using units to compare later

The NCTEM identify six areas that underpin early mathematics together forming the foundation for children's mathematical development, as they move through primary school and beyond.







Early Learning Goals (ELGs)

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.

THE ADULT'S ROLE

- Model accurate language: more, fewer, equal, altogether, next to, longer, heavier and pattern.
- Ask children to show how they know and represent an amount in different ways.
- Teach key concepts deliberately, moving between real objects, images and symbols as appropriate.
- Notice mathematical thinking during play and extend it with prompts or challenges.
- Revisit concepts across different contexts and help children explain their reasoning.
- Children count objects with increasing accuracy and recognise small quantities without counting each item.
- Children explore how numbers can be composed and separated and compare quantities.
- Children notice, continue and create patterns and use mathematical language.
- Children compare shape, space and measures through practical experiences.