0 – 5 maths curriculum

Steps to success

Mathematics

Ladybirds

Step 1
Explores space when they are free to move, roll and stretch

Step 2
Developing an awareness of their own bodies, that their body has different parts and where these are in relation to each other
Explores differently sized and shaped objects

Step 3
Take part in finger rhymes with numbers.
Beginning to put objects inside others and take them out again
Explores space around them and engages with position and direction, such as pointing to where they would like to go

Caterpillars

Step 1
Shows interest in patterned songs, rhymes and movements
Begins to predict what happens next in predictable situations
Shows an interest in emptying containers

Step 2
Responds to size, reacting to very big or very small items that they see or try to pick up
May be aware of number names through their enjoyment of action rhymes and songs that relate to numbers
Stacks objects using flat surfaces
Enjoys filling and emptying containers

Step 3
Attempts, sometimes successfully, to match shapes with spaces on inset puzzles
Joins in with repeated actions in songs and stories
Gets to know and enjoys daily routine

Butterflies

Step 1
Responds to words like *lots* or *more*
Says some counting words
Pushes objects through different shaped holes, and attempts to fit shapes into spaces on inset boards or puzzles

Step 2
May engage in counting-like behaviour, making sounds and pointing or saying some numbers in sequence
Beginning to select a shape for a specific space
Shows an interest in size and weight

Step 3
May use number words like *one* or *two* and sometimes responds accurately when asked to give one or two things
Enjoys using blocks to create their own simple structures and arrangements
Beginning to understand that things might happen now or at another time, in routines

Mathematics

Nursery

Step 1

Fast recognition of up to 3 objects, without having to count them individually ('subitising').

Recite numbers past 5.

Talk about and explore 2D shapes (for example, circles, rectangles, triangles) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'

Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.

Step 2

Say one number for each item in order: 1,2,3,4,5.

Experiment with their own symbols and marks as well as numerals.

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 positional language through words alone – for example, "The bag is under the table," – with no pointing

Combine shapes to make new ones – an arch, a bigger triangle etc.

Talk about and identifies the patterns around them. For example: stripes on clothes. Use informal language like 'pointy', 'spotty', 'blobs' etc.

Extend and create ABAB patterns – stick, leaf, stick, leaf.

Step 3

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.

Solve real world mathematical problems with numbers up to 5

Begin to make comparisons between objects relating to size, length, weight and capacity.

Notice and correct an error in a repeating pattern.

Reception

Step 1

Describe a familiar route and discuss routes and locations, using words like 'in front of' and 'behind'.

Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Count objects, actions and sounds.

Count beyond ten.

Subitise to ten.

Link the number symbol (numeral) with its cardinal number value.

Continue, copy and create repeating patterns.

Step 2

Count beyond 20

Understand the 'one more than/one less than' relationship between consecutive numbers

Explore the composition of numbers to 10.

Select, rotate and manipulate shapes in order to develop spatial reasoning skills.

Compare length, weight and capacity.

Step 3

Automatically recall number bonds for numbers 0–5 and some to 10.

Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.

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

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ELG: 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

ELG: 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

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Steps to success

At Bridgewater School, our experienced staff have worked alongside Beth Dunn from the local authority to identify the steps needed to ensure progression in maths. This has been put together collaboratively, with links to the Early Learning Goals included.

As the children progress into Reception they participate in Mastering Number in Reception (NCETM) and also make use of the White Rose Maths resources.

Our Early Years also ensure continuous provision of maths throughout the day, allowing for exploration and consolidation of concepts.