Knowledge, Skills and Understanding
Mathematics

Nursery

3 & 4 year olds will be learning to:

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

Core Texts	Core Experiences	Daily Routines
Ten Little Pirates Golidlocks and the Three Bears Where's my Teddy? The Very Hungry Caterpillar	Baking	Number rhymes Number songs Calendar/counting who is here Tidy-up time Snack time – counting Visual timetable

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Reception

Reception children will be learning to:

Number	Numerical Patterns
• Count objects, actions and sounds. • Subitise up to 5. • Use positional language. • Link the number symbol (numeral) with its cardinal number value. • Count beyond ten. • Compare numbers, using vocabulary such as more than, less than, fewer, the same as and equal to. • Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 5 then 10. • Automatically recall number bonds for numbers 0–10, with a focus on 0-5. • Understand what money is for. • Recognise coins 1p, 2p, 5p and 10p. • Order a sequence of events and use time language e.g. yesterday, today, tomorrow. • Double numbers to 5. • Explore odd and even numbers.	• Select, rotate and manipulate shapes in order 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. • Notice and correct an error in a repeating pattern. • 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', • Order a sequence of events and use time language e.g. yesterday, today, tomorrow. • Compare length, weight and capacity.

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Reception – end of year expectations

ELG Number	ELG Numerical Patterns
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.	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.

Core Texts	Core Experiences	Daily Routines
10 Dots 1 is a Snail, 10 is a Crab	Baking Shopping Visit to Stapleford Woods/Sherwood Pines	Number rhymes/songs Calendar/register time discussions Visual timetable Tidy-up time Snack time