



Curriculum Overview and Progression for Mathematics
Number, Numerical Patterns and Measures, Shape & Spatial Thinking
Early Years Curriculum

Key Concepts / Progression of Skills

Prior Learning

Number and Numerical Patterns	Measures, Shape & Spatial Thinking
<ul style="list-style-type: none"> I know that things exist, even when out of sight. I am beginning to organise and categorise objects (e.g. putting all the teddy bears together or teddies and cars in separate piles). I can say some counting words randomly. I can select a small number of objects from a group when asked (e.g. ‘please give me two’). 	<ul style="list-style-type: none"> I can attempt, sometimes successfully, to fit shapes into spaces on inset boards or jigsaw puzzles. I can use blocks to create my own simple structures and arrangements. I can fill and empty containers. I can associate a sequence of actions with daily routines. I am beginning to understand that things might happen ‘now.’

Nursery

Number and Numerical Patterns	Measures, Shape & Spatial Thinking
<p>During Nursery (Autumn Spring)</p> <ul style="list-style-type: none"> I can recite some number names in sequence (not necessarily understand at this stage). I can mark make and ascribe some concept of number to the marks (attempts at digits from the environment, making dots, lines etc). I can show understanding of conservation. I can sort objects using one simple criteria. I can bring one or two objects when an adult requests. I can show an understanding of simple comparisons like ‘more’. 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’. 	<p>During Nursery (Autumn Spring)</p> <ul style="list-style-type: none"> I can start to fit shapes into board puzzles or shape sorters. I can begin to build using simple blocks. I can fill and empty a container. I can show some understanding of ‘now’ and ‘next’. I can see some shapes in pictures and can start to make pictures using shapes. I can ask questions about the routine and what is happening next. I can use small world play to experiment with size, shape, differences and similarities. 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 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. <p>End of Nursery</p>

Early Years Curriculum – Mathematics

- *Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.*
- *Extend and create ABAB patterns – stick, leaf, stick, leaf.*
- *Notice and correct an error in a repeating pattern.*
- *Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'*

End of Nursery

Number and place value

- I can use number names to 10 and sometimes count accurately.
- I can represent numbers using marks, fingers or digits.

Calculation

- I can say when two small groups have the same number of objects.
- I can identify numerals in the environment.

- I can talk about the routine of the day and use language like 'before' and 'after'.
- I can use comparative language like 'taller', 'shorter', 'the same'.

Geometry – properties of shapes

- I can start to identify shapes in the environment.
- I can start to find appropriate shapes for certain tasks.
- I can ask questions about my observations of differences and similarities.

Geometry – position and direction

- I can start to make more meaningful pictures, patterns and arrangements with shapes.

Reception

Number and Numerical Patterns	Measures, Shape & Spatial Thinking
<p>Number and Place Value (Autumn Spring)</p> <ul style="list-style-type: none"> I can count up to three or four objects by saying one number name for each item. I can select the correct numeral to represent 1 to 5 I can count objects to 5 and begin to count to 10 I can begin to Subitise numbers to 3 I can count objects, actions and sounds. I can link the number symbol (numeral) with its cardinal number value. 1-5 I understand the ‘one more than/one less than’ relationship between consecutive numbers 0-5. I can recognise some numerals of personal significance I can count up to three or four objects by saying one number name for each item. I can count out up to six objects from a larger group. I can count objects to 10 and begin to count beyond 10. I can select the correct numeral to represent 1 to 10 objects. I can begin to use ‘teens’ to count beyond 10. I can count an irregular arrangement of up to ten objects. I can find one more or one less from a group of up to five objects, then ten objects. I can estimate how many objects I can see and check by counting them. I can use the language of ‘more’ and ‘fewer’ to compare two sets of objects. I fully understand 5, 6, 7 etc and all manipulations of the number. Count objects, actions and sounds. Subitise. Link the number symbol (numeral) with its cardinal number value. (5-10) Count beyond ten. Compare numbers. Understand the ‘one more than/one less than’ relationship between consecutive numbers. Continue, copy and create repeating patterns. <p>Calculation</p> <ul style="list-style-type: none"> I can recognise some numerals of personal significance. I can find the total number of items in two groups by counting all of them and starting to use ‘counting on’. I can begin to use the vocabulary involved in adding and subtracting including counting on and back. I understand addition up to 5 using all combinations. Then 6, 7, 8, 9, 10. 	<p>Measurement (Autumn Spring)</p> <ul style="list-style-type: none"> I can talk about the routine of the day and use language like before, after. I can use comparative language like taller, shorter, the same. I can experiment with length, height, capacity and use my findings to order and group items. I can identify money and I can start to use money in my play. I can recall routines and start to relate them to the time on the clock. Compare length, weight and capacity. <p>Geometry – properties of shapes</p> <ul style="list-style-type: none"> I can start to identify shapes in the environment. I can start to find appropriate shapes for certain tasks. I can ask questions about their observations of differences and similarities. I can recall names for 2D and 3D shapes and I can use some of the terms to describe their properties. I can order and sort according to simple properties. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. <p>Geometry – position and direction</p> <ul style="list-style-type: none"> I can start to make more meaningful pictures, patterns and arrangements with shapes. I can notice similarities, differences, patterns and changes. I can use the language of direction when programming toys Select, rotate and manipulate shapes in order to develop spatial reasoning skills.

Early Years Curriculum – Mathematics

- *Explore the composition of numbers to 10.*
- *Automatically recall number bonds for numbers 0–10.*

Fractions

- *I can show some understanding of doubling and halving in familiar contexts.*

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.*

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.*