

Progression of skills map for Maths
2022-2023



	YE - Birth to 3	Nursery / Pre-school Birth to Three / 3-4yrs	Reception Year
<p style="text-align: center;">Intent</p> <p style="text-align: center;">(WHAT - Skills/objectives/covergae...To...)</p>	<ul style="list-style-type: none"> • I know how to take part in finger rhymes with numbers. • I know how to sort by colour and size understanding language such as big / small. • I know how to react to changes of amount in a group of up to 3 items. • I know how to compare amounts saying 'lots', 'more' and 'same'. 	<ul style="list-style-type: none"> • I know how to describe and use shapes in my creative work and constructions. • I know how to understand in more detail numbers to 5. • I know how to subitise up to 3. • I know how to recognise and make patterns. • I know how to explore and compare quantities using words like more and fewer than. 	<ul style="list-style-type: none"> • I know how to understand in depth numbers to 10, including number bonds. • I know how to recognise the pattern of the counting system. • I know how to compare quantities in different contexts . • I know how to name and describe 2D and some 3D shapes.

**Implementation
(HOW?
Strategies/interventions/process)**

<ul style="list-style-type: none"> • Opportunities in the environment both inside and outside. • Emerging them in number rhymes such as: <ul style="list-style-type: none"> ➢ 5 little ducks ➢ 5 fat sausages ➢ 5 cheeky monkeys jumping on the bed ➢ 5 current buns ➢ 1, 2, 3, 4, 5 once I caught a fish • Whole class / group number rhymes, counting rhymes and singing. • Providing high quality, open ended loose parts play supported by rich language through adult conversation and commenting on children's play. • Opportunities during all aspects of the day such as snack time, welcome, home times - link to rhymes. • Adult initiated games such as 'Kims Game' • Open ended resources including loose parts, blocks, encouraging building, sorting and arranging, adding more, taking away. • Adults scaffolding Maths through commenting using mathematical language such as lots, more, same. 	<ul style="list-style-type: none"> • Role of the adult in developing mathematical concepts and language. • Rich language environment. • Opportunities in the environment both inside and outside. • Sing a range or number and counting songs such as: <ul style="list-style-type: none"> ➢ 5 little men in a flying saucer ➢ One Potato, Two Potato ➢ 5 Cheeky monkeys swinging in the trees ➢ Alice the Camel ➢ 5 in a bed • Compare and order amounts and match number names to quantities and numerals. • Opportunities to touch and count different arrangements, beginning to learn that the final number they say is the amount (cardinal). • 1:1 counting opportunities through stories and rhymes. • Daily activities to support subitising to 3 using the appropriate language "What can you see?" • Understanding numbers to 5 in depth by using activities and opportunities such as 'Number of the week' Focussing on the concept / quantity / conservation of number, the numeral, ordinal, place value of the number within the number system and the representation of the number eg fingers, marks, numicon, 5 frame, images etc. • Use Number Blocks episodes to support learning. • Offer a range of activities to recognise and name colours in different contexts eg toys, nature, environment, matching hair and skin colours, clothes etc. Learning to recognise when objects are not the same colour, • Sorting and comparing sets such as blocks, socks, loose parts etc. Based on colour, shape or size. 	<ul style="list-style-type: none"> • Opportunities in provision both inside and outside. • Role of the adults to model and support the development of Mathematical concepts and language. • Rich language environment evident throughout provision and throughout the daily routine, tidy up times, lining up, counting snack etc. • Sing a range of counting songs such as: <ul style="list-style-type: none"> ➢ 5 current buns ➢ 5 little speckled frogs ➢ 10 green bottles ➢ 10 in a bed ➢ 10 fat sausages • Whole class number rhymes, counting games and singing opportunities daily. • Counting verbally beyond 10 / 20 beginning to identify higher numbers in the environment. • Looking at the composition of numbers to 10 using tens frames and visual models. • Number of the week - looking at numbers in depth. • Counting objects of different sizes and counting objects that cannot be seen. • Opportunities to count objects that cannot be moved eg pictures on a screen. • Play games involving counting. • Use dot cards and dominoes including irregularly arranged dots. • Play 'show me' using fingers. • Identify numeral meanings eg. Reading numbers in the environment. • Opportunities to recognise amounts that have been arranged. • Opportunities to recognise amounts that have been rearranged. • Selection of activities to support subitising using the language 'What can you see?' • Subitising - making arrangements to 10, talking about the arrangements as a whole. • Play games which involve quickly revealing and hiding numbers of objects.. • Collections of items to sort and compare including objects of different sizes. • Group objects, compare and convert 2 unequal groups into 2 that have the same number.
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Adults modelling and encouraging language such as big, little, small and large.

- Encourage children to notice shapes in the environment through daily activities and opportunities both inside and outside. Talk about the properties of these shapes - straight / round / flat.
- Through play opportunities build on an understanding of full and empty. Explore the concept through sand, water, rice, loose parts. Providing different shape and size containers.
- Make direct comparisons around weight, height and length. Using language in a context such as "The tree is tall".
- Talk about day and night encouraging routines and talk about key events in their day.

- Labelling objects and groups with correct numerals.
- Inverse operations - using a skittles game looking at how many are left standing or have fallen over.
- Partitioning activities using Numicon or putting objects into 2 groups.
- Make a number with 2 different kinds of things such as cubes, objects, blocks, loose parts, talking about what they have made.
- Using role play eg. Arranging amounts of toys, playing shop.
- Use other areas of provision to sort / arrange objects e.g. Characters in small world.
- Using visual and practical displays showing different ways of making numbers.
- Spot opportunities throughout the day to apply number bonds.
- Use frames to look at how many spaces are filled and unfilled.
- Model measures vocabulary throughout the provision in a range of areas.
- Create opportunities to discuss length, weight and size in provision eg. Make different snakes with play dough in malleable area.
- Use comparative language such as 'heavier than' etc.
- Opportunities to highlight capacity through water and sand play, asking children to make predictions eg. 'Which holds more?'
- Make patterns using objects with varying rules AB, ABB, ABBC.
- Opportunities for children to spot deliberate mistakes.
- Using indoor and outdoor resources to create patterns.
- Use building blocks, magnetic construction as well as found materials to manipulate shapes.
- Challenge children to copy complex 2d / 3d pictures and patterns with these 3d resources.
- Solve a range of jigsaws of increasing challenge.

Impact

(WHY?
Outcomes/assessment. I know how to)

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| <ul style="list-style-type: none">• I know how to combine and stack objects like blocks and cups.• I know how to put objects inside others and take them out again.• I know how to join in number and counting rhymes using my fingers.• I know how to develop counting-like behaviour, such as making sounds, pointing or saying numbers in sequence.• I know how to sort different things by colour and size.• I know how to understand language such as big and small.• I know how to climb and squeeze into different types of spaces.• I know how to react to the changes in a group of up to 3 items.• I know how to compare amounts saying 'lots', 'more' and 'same'.• I know how to compare sizes using gesture and language - 'bigger', 'little', 'smaller', 'high', 'low', 'tall' and 'heavy'.• I know how to begin to notice patterns around me such as spots, stripes etc. | <ul style="list-style-type: none">• I know how to record in my own way using symbols, marks and numerals.• I know how to understand, talk about and use numbers to 5 in depth.• I know how to subitise to 3 in a variety of contexts.• I know how to solve mathematical problems through my play.• I know how to compare quantities and use language such as more than / fewer than.• I know how to talk and explore 2D and 3D shapes and begin to use informal and Mathematical language. I use these in my work.• I know how to talk about locations, use positional language and describe familiar routes.• I know how to compare objects relating to size, length, weight and capacity.• I know how to recognise and make patterns and begin to notice when there is an error in the pattern. | <ul style="list-style-type: none">• I know how to count objects, actions and songs, recognising the pattern of the counting system.• I know how to say how many there are after counting.• I know how to say how many there might be before counting.• I know how to sing songs and number rhymes and enjoy stories involving counting.• I know how to use my number knowledge to 10 in depth.• I know how to subitise to a higher number (up to 10) in a variety of contexts.• I know how to link the number symbol with its value.• I know how to verbally count beyond 20.• I know how to compare numbers using vocabulary more than / less than / fewer than / same as / equal to.• I know how to understand one more /one less .• I know how to talk about the composition of numbers up to 10.• I know how to recall number bonds for 0-5 and some to 10.• I know how to rotate and manipulate shapes to develop spatial reasoning skills.• I know how to continue, copy and create repeating patterns.• I know how to compare length, weight and capacity using concepts such as 'which holds more' etc.• I know how to name common 2D shapes and 3D shapes and describe 2D shape properties. |
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