Long-term Maths Planning for 3-4s

PLEASE NOTE: A lot of the mathematical language highlighted throughout all the maths planning documents is for adults to use and not for children to be repeating or using in their play. In the EYFS, EY practitioners need to **model vocabulary** in an **appropriate playful context** so that when more formal learning takes place in the National Curriculum years, children will be able to build upon the foundations that the EY practitioners helped foster in those first few years of their life.

Number	Term 1 Autumn 1	Term 2 Autumn 2	Term 3 Spring 1	Term 4 Spring 2	Term 5 Summer 1	Term 6 Summer 2
Subitising	Dice and dominoes in provision. Adult to say the number of dots they say, if children interact with the dice.	Teaching to subitise 1 and 2 on a standard dice.	Teaching to subitise 3 on a dice. Adult to model the sentence stem, 'I can see...'	Subitising 1-3 in everyday life (body parts, shake and spill, feely bag, etc.)	Subitise 1-3 pictures of objects, e.g. on flashcards, in books, etc.	Teach subitising 4-6 on a standard dice. Subitise non-standard dot arrangements.
Five Frames			Show 1 and 2 on a 5 frame with collections. Say, "I can see 1/2 objects".	Show 3 and 4 on a 5 frame with collections. Say, "I can see 3/4 objects".	Show 5 on a 5 frame with collection. Say, "I can see 5 objects".	Show 1-5 on a 5 frame and play simple games with dice and flashcards.
Fingers	Adult to model showing fingers alongside songs and books.		Children to grow fingers 1-3 on one hand.		Children to grow and show numbers 1-5 on one hand.	
Numberblocks			Watch 'Number 1' 'Number 2' and 'Another 1'.	Watch 'Number 3' 'One, Two, Three' and 'Number 4'.	Watch 'Number 5'.	Rewatch episodes 1-6.
Number Collections			Number 1 and 2 collections. Use numeral, object, dice pattern, finger, numberblock, objects, etc.	Number 3 and 4 collections. Use numeral, object, dice pattern, finger, numberblock, objects, etc.	Number 5 collection. Use numeral, object, dice pattern, finger, numberblock, objects, etc.	Number 1-5 collections. Model simple challenges, e.g. numbers hiding within others.
Numicon	Access to numicon shapes 1-5 for children to explore in provision. Adult to name the numicon in play.		Teach numicon shapes 1 and 2.	Teach numicon shapes 3 and 4.	Teach numicon shape 5	Introduce reasoning with numicon, spotting mistakes. E.g. my two numicon shapes make 5.

Comparing and Ordering Numbers	Introduce the language of 'more' and 'few', e.g. "there are only a few oranges left". Model the language of 'more' and 'fewer' in play and offer provocations for children to join in.		Compare numbers by saying which number is bigger or smaller.	Adult to lead the use of more/few/fewer and problem solve how to make two groups the same.	Model the use of number tracks that run horizontally and vertically.	Children to solve practical problem to 5.
Choral Counting	Adult-led counting to 5		Adult-led counting to 10	Counting Ping Pong		Counting backwards from 5.
Songs and Rhymes	- 1, 2, 3, 4, 5, once I caught a fish alive - 1 potato, 2 potato	- 1, 2, 3, 4, 5, once I caught a fish alive - 1 potato, 2 potato - Elephant song - 1 little, 2 little, 3 little dinosaurs - Hickory dickory dock	- Here is the beehive - The ants go marching 1 by 1 - Peter hammers - 1 big hippo balancing	- 1 man went to mow - Dr Knickerbocker - How many fingers on one hand? - When I was 1, I sucked my thumb - 5 little bears - 5 little ducks (sing forwards) - 1, 2 buckle my shoe	- Zoom, zoom, zoom we're going to the moon	- 5 little men - 5 little ducks - 5 current buns - 5 speckled frogs - 5 green bottles - 5 in the bed
Physical Counting	Adult to model touch counting and show an expectation of naming the size of the group by repeating the last number, with reference to objects, e.g. "1, 2, 3. 3 bears". Count small sets of objects given to them.		Children to count 1 to 3 objects from a larger set.		Children to count up to 3 objects/pictures that aren't the same. E.g. a teddy, car and ball in a picture.	Children to count up to 5 objects/pictures that aren't the same. E.g. a teddy, car and ball in a picture. Children to count drum beats/sounds controlled by an adult. Children to count moving objects/things
Talk Pictures			Share counting books with children.		Look at a talk picture - can you see sets of 1 thing, sets of 3 things, how many of something can you see? Cross off once counted or just focus on a small section of the talk picture.	
Mark-making	Talk about 'numbers' in pictures that children have drawn,	Encourage children to represent their mathematical ideas through marks and drawings – these are mathematical graphics.		How can you remember what is in the box (box contains	Adult to model how to represent number through mark-making, e.g. "I wonder what we can put on this paper to help us to remember our score". Explore the options – they might	

	e.g. "Oh, look, you have drawn 2 eyes".	Mathematical Graphics represent uncounted and counted quantities. • Children holding more than one pen and saying 'hundreds and thousands' • Children drawing an 'x' to show you must jump once, 2 x's for 2 jumps • Drawing circles in 5s frames • Drawing shapes/marks as part of number collections • Drawing 5 faces to represent who is having snack		1 2 and 3 objects)? Draw a representation.	suggest drawing who won, for example, work through how that will work in the long run, etc. Introduce tallies.	
Environment	Numicon shapes and boards, loose parts, numerals with (numicon) representations, dice/dominoes, pegs and boards, sorting trays/rings, compare bears, linking animals, etc.	Number track, jigsaw puzzles.	Scales for weighted numicon, numberblock characters and 'snap' cubes.		Numicon number plates for wheeled toys to numicon parking spaces. Board games, e.g. ladybird games, 5 frame games, etc.	Number track - vertical and horizontal, 5s frame bus.
Routine	• At the beginning of a group activity, count the children present, e.g. "1, 2, 3 - 3 children". Ensure adults says "3 children" to aid cardinality learning and show numeral and numicon piece to match. • Self-register into colour (key worker) groups so that the number remains small. • Have numeral/numicon pieces in certain areas to show how many children should be there. • Have the correct amount of snack and milk and as year progresses, create challenges - see Mathematical Snack document for further ideas on 'sabotaging' snack to encourage problem solving. • Show children how much fruit they can have by showing them the numicon piece.					

Shape, Space and Measure	Term 1 Autumn 1	Term 2 Autumn 2	Term 3 Spring 1	Term 4 Spring 2	Term 5 Summer 1	Term 6 Summer 2
Shape	Adults to use 3D shape names and describe shapes informally. 3D shapes can be picked up, e.g. paper is 3D.	3D shape of the week with 3D shape sorting activities	Geoboards and Numicon overlays	Comparing and combining some 3D shapes Tap-a-shape Transient art Tessellating shapes	Introduce 2D shapes – shadows, stamp and trace 3D shape counterparts. Sort images on cards. 2D shapes cannot be picked up, e.g. drawings and shadows.	Comparing and combining some 2D shapes Explore irregular 2D shapes
Block Play	Make the tallest tower you can	Make a tower taller than you	Create a bridge	Create a bridge	Create bridges of increasing complexity	Enclosures
Measure Language	Big and small	Tall and short	Long and short	Full and empty	Heavy and light	First, next, then
Positional Language	Understand and use 'in' and 'on'	Understand and use 'under'	Understand 'next to'	Understand 'behind' and 'in front'	Understand 'in between'	Consolidate all
Pattern	Designs, e.g. spotty and stripy. Creating arrangements		Continue and copy an AB pattern		Copy and create an AB pattern	Create an AB pattern and spot errors
Mark-making		Notice shapes drawn, e.g. circles for eyes, etc.			Draw around 3D shapes and make links to 2D created.	
Songs, Rhymes and Books	- Books for pattern – You Choose, Hooray for Fish - Books for spatial reasoning – Maisy Goes Camping, My Cat Likes to Hide in Boxes.	Positional language songs 3D shape songs Books for Measures – Goldilocks and the 3 Bears.	Measures songs Pattern songs - Books for shape - Colour Zoo by Lois Ehlert - Books for measures – Dear Zoo, Titch, The Hungry Caterpillar, Rapunzel, We're Going on a Bear Hunt, The Tiny Seed, - Books for pattern – The Hungry Caterpillar, Elmer, Up and Down, Pattern Fish, - Books for spatial reasoning – The Train Ride, Snail Trail		2D shape songs - Books for measures - Dinosaur's Day Out by Nick Sharratt, Cook It! - Books for spatial reasoning – Rosie's Walk	Mystery Bag – shape song
Puzzles	Shape sorters and inset puzzles	2–4-piece interlocking puzzles and more complex inset puzzles	4–8-piece interlocking puzzles	4–10-piece interlocking puzzles	4–12-piece interlocking puzzles. Consider putting two puzzles in one box to sort, puzzles without a picture, puzzles not of an ordinary shape or layering, etc.	

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<tr><td rowspan="2">Environment</td><td colspan="4">

Indoor loose parts/collections - keys, sticks, buckets, ribbons of differing widths/lengths, shoes, chains, teapots, etc.
Outdoor loose parts – crates, tyres, planks, tree stumps, cable reels, buckets, etc.
Cardboard boxes of differing sizes to challenge concepts of light and heavy.
Junk modelling, including cylinders and cuboids.
Food packets and tins in role-play
Playdough
Water containers (different weights and sizes) as well as water in tuff trays and water trays to encourage transportation.
Sand containers (different sized containers) - not just typical sandcastle containers, include, buckets, pails, etc.
Balls and beanbags (different weights and sizes)
Tubing and guttering (different sizes)
Unit blocks and hollow blocks (different sizes)

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<tr><td></td><td>Rulers
Tape measures
Metre sticks</td><td>Tinker area – screws, etc.
Interlocking shapes
Bucket balancers
Lentils/rice/pasta for weighing</td><td></td></tr>
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<tr><td colspan="2"></td><td>Lining up song – “One behind the other, one behind the other, one behind the other, lets’ all make a line”.</td><td></td></tr>
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