



Mathematics Knowledge and Skills Progression in Reception

	Pre- Reception Baselines At age 3-4	Autumn Term	Spring Term	Summer Term
Number (Maths)	Develop fast recognition of up to 3 objects, without having to count them individually (subitising). Recite numbers past 5. Say one number of 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 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 and 3D shapes (for example, circles, rectangles, triangles, and cuboids) using information and mathematical	Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. Pupils will: • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number	Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. Pupils will: • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers • understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern	Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. Pupils will: • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2



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	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'. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc.	• develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds	• order numbers and play track games	<u>ELG Number</u> <i>Have a deep understanding of number 10, including the composition of each number.</i> <i>Subitise (recognise quantities without counting) up to 5.</i> <i>Automatically recall – without reference to rhymes, counting or other aids – number bonds up to 5. Recall some number bonds to 10, including doubling facts.</i>
Numerical Patterns (Maths)	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...	• compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts	• join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers	Become familiar with numbers 10-20 and start to notice patterns within them <u>ELG Numerical Patterns</u> <i>Verbally count beyond 20, recognising the pattern of the counting system.</i> <i>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as another quantity.</i> <i>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</i>



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Shape, Space & Measures		Continue, copy and create repeating patterns (AB) Compare weight using comparative language 'than'. Select, rotate and manipulate shapes (2D)	Continue, copy and create repeating patterns. (ABB and ABBC) Compare length, weight and capacity Select, rotate and manipulate shapes (3D)	Continue, copy and create repeating patterns (ABBC) Compose and decompose shapes so that recognise a shape can have other shapes <i>within</i> it, just as numbers can. No ELG relating to Shape, Space and Measures