

Maths Progression of Skills and Knowledge
Number

	Caterpillars 2- 3 year olds	Butterflies 3- 4 year olds	Reception 4-5 year olds	ELG checkpoint Children at the expected level of development will
	<ul style="list-style-type: none"> • Responds to words like lots or more • Says some counting words • May engage in counting-like behaviour, making sounds and pointing or saying some numbers in sequence • Enjoys filling and emptying containers • Pushes objects through different shaped holes, and attempts to fit shapes into spaces on inset boards or puzzles • Becoming familiar with patterns in daily routines • Beginning to arrange items in their own patterns, e.g. lining up toys • Uses number words, like one or two and sometimes responds accurately when asked to give one or two things Beginning to select a shape for a specific space • Beginning to understand that things might happen now or at another time, in routines • Explores capacity by selecting, filling and emptying containers, e.g. fitting toys in a pram • Enjoys using blocks to create their own simple structures and arrangements • Investigates fitting themselves inside and moving through spaces • Moves their bodies and toys around objects and explores fitting into spaces • Shows an interest in size and weight • Begins to remember their way around familiar environments • Joins in with and predicts what comes next in a story or rhyme • Begins to say numbers in order, some of which are in the right order (ordinality) • Chooses puzzle pieces and tries to fit them in • Makes simple constructions 	<ul style="list-style-type: none"> • Begin to recognise numerals 0 to 10 • Beginning to compare and recognise changes in numbers of things, using words like more, lots or 'same' • Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle) • Links numerals with amounts up to 5 and maybe beyond • Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers • Beginning to recognise that each counting number is one more than the one before • Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same • Beginning to use understanding of number to solve practical problems in play and meaningful activities • Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC) • In meaningful contexts, finds the longer or shorter, heavier or lighter and more/less full of two items • Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes • Chooses items based on their shape which are appropriate for the child's purpose • Responds to both informal language and common shape names • Shows awareness of shape similarities and differences between objects • Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes • Attempts to create arches and enclosures when building, using trial and improvement to select blocks 	<ul style="list-style-type: none"> • Uses number names and symbols when comparing numbers, showing interest in large numbers • Estimates of numbers of things, showing understanding of relative size • Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0 • Increasingly confident at putting numerals in order 0 to 10 • Engages in subitising numbers to four and maybe five • Counts out up to 10 objects from a larger group • Matches the numeral with a group of items to show how many there are (up to 10) Composition • Shows awareness that numbers are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects • In practical activities, adds one and subtracts one with numbers to 10 • Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints • Investigates turning and flipping objects in order to make shapes fit and create models; predicting and visualising how they will look (spatial reasoning) • May enjoy making simple maps of familiar and imaginative environments, with landmarks • Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes • Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes • Uses own ideas to make models of increasing complexity • Spots patterns in the environment, beginning to identify the pattern "rule" 	<ul style="list-style-type: none"> • 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

			<ul style="list-style-type: none"> • Chooses familiar objects to create and recreate repeating patterns beyond AB patterns and begins to identify the unit of repeat • Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy • Becomes familiar with measuring tools in everyday experiences and play • Is increasingly able to order and sequence events using everyday language related to time 	
Key vocabulary	One, two, more, lots big, little, full, empty	Number names. More, fewer, pattern, shape longer, shorter, heavier, lighter, 2D shapes-square, circle, triangle, rectangle, group, lots, same	Number, numeral, digit, count, subitise, add, subtract, 5 frame, 10 frame, many, total, more, less, fewer, , count on, count back, part, whole, add, count on, more, total, altogether, sum, plus, take away, less, fewer, minus, count back, between, groups of, lots of, equal, double, even, odd, share, half, up, down, left, right, turn, pattern, shapes, 2d shape, 3d shape, problem, position, group, larger, smaller	
Key visitors / visits / experiences	Use of tidy up routine / snack time to support maths Singing number rhymes and listening to number stories Opportunities for Maths across the curriculum e.g. cooking, sand, water	Use of tidy up routine / snack time to support maths Singing number rhymes and listening to number stories Opportunities for Maths across the curriculum e.g. cooking, sand, water	Use of tidy up routine / snack time to support maths Singing number rhymes and listening to number stories Opportunities for Maths across the curriculum e.g. cooking, sand, water Daily maths adult led activities	
What is this the foundation for?	<p>In year one children will:</p> <ul style="list-style-type: none"> • Count to and across 100 • Count in 2's, 5's and 10's • Read and write numbers 1 – 20 • Add and subtract 1 and 2 digit numbers to 20 • Know number bonds to 20 • Solve one step problems using multiplication and division 			

