

Maths Progression

Pre-School	Autumn 1		Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
ELG: Number Children at the expected level of development will: • Have a deep understanding of numbers 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.							
Progression of skills and knowledge	N1 <ul style="list-style-type: none">Anticipate what comes next in familiar routines (such as home time, after story or handwashing before lunch).Enjoy patterned songs, rhymes, stories and activities, joining in with repeated actions or phrases, predicting what comes next using the pattern.Selects an object by its shape for a particular purpose or to fit into a specific space.Move and turn objects if they will not fit.		N1 <ul style="list-style-type: none">Through gesture, words or responses, shows attention to size (big, small, tall), weight(heavy) and capacity (full, empty, all gone).Arranges objects in their own pattern (such as in a line).Recognise that two objects have the same shape.Find their way around familiar environments, navigating around obstacles.	N1 <ul style="list-style-type: none">Begins to understand that print has meaningNotices some print e.g. first letter of their name, bus or door numberPretends to read textUse props alongside familiar story to retell using key wordsEnjoys rhythmic and musical activity with percussion instruments, actions, rhymes and songs, clapping along with the beat and joining in with the words of familiar songs and nursery rhymes			
	N2 Counting <ul style="list-style-type: none">Say number words to 5 (as a string, "onetwothree" or song tune). Identifies numerals of personal significance, e.g. their age, house number Cardinality <ul style="list-style-type: none">Recognise changes in amount.Respond to familiar number words as relating to a number of things. Measurement <ul style="list-style-type: none">Compare items to decide which is the tallest/ shortest when there is an obvious difference.Sequence a small number of familiar events using words such as 'first' and 'then' Shape <ul style="list-style-type: none">Use words or gestures to describe circles by their properties	N2 Counting <ul style="list-style-type: none">Says the numbers in order to 5 Cardinality <ul style="list-style-type: none">Responds to one or two by showing or getting one or two thingsAble to show 1 and 2 on fingersLinks numerals with amounts up to 2. Composition <ul style="list-style-type: none">Children are aware that although the number 2 can be split the whole number is still the same. Measurement <ul style="list-style-type: none">To compare two items to decide which is the longer/ shorter or heavier/lighter, Pattern <ul style="list-style-type: none">Children to begin to copy, repeating patterns of two repeating elements (AB). Shape <ul style="list-style-type: none">Use shapes to make pictures and build structures with walls, corners and bridgesUse words or gestures to describe rectangles by their properties .	N2 Counting <ul style="list-style-type: none">Say one number for each item when counting to 5 (one-to-one), perhaps by pointing or touching. Cardinality <ul style="list-style-type: none">Responds to three by showing or getting three itemsAble to show 3 on fingersLinks numerals with amounts up to 3. Composition <ul style="list-style-type: none">Children are aware that although the number 3 can be split the whole number is still the same. Measurement <ul style="list-style-type: none">Shows attention to size - big, medium, smallTo sequence familiar stories in 3 stages (beginning, middle, end) Pattern <ul style="list-style-type: none">Children to begin to copy, repeating patterns of two repeating elements (AB). Shape <ul style="list-style-type: none">Use words or gestures to describe triangles by their properties	N2 Counting <ul style="list-style-type: none">Recites counting words in order to 10Recognise some numerals. Cardinality <ul style="list-style-type: none">Responds to four by showing or getting for itemsAble to show 4 on fingersLinks numerals with amounts up to 4.Able to say 'How many' without recounting Composition <ul style="list-style-type: none">Children are aware that although the number 4 can be split the whole number is still the same. Measurement <ul style="list-style-type: none">Shows attention to weight (heavy, light) capacity (full, empty, all gone) and amounts (more, less). (cooking) Pattern <ul style="list-style-type: none">To copy and continue, repeating patterns of two repeating elements (AB). Shape <ul style="list-style-type: none">Use words or gestures to describe Squares by their properties	N2 Counting <ul style="list-style-type: none">Says one number for each item when counting to 10 (one-to-one), perhaps by pointing or touching. Cardinality <ul style="list-style-type: none">Responds to five by showing or getting five itemsAble to show 5 on fingersLinks numerals with amounts up to 5. Measurement <ul style="list-style-type: none">To sequence a series of events in 5 stages. (life cycles) Shape <ul style="list-style-type: none">Children to recognise two or three familiar shapes (in different sizes and orientations).To point out familiar shapes in their environment	N2 Counting <ul style="list-style-type: none">Put numerals in order to 5.Recognises numerals to 5 Cardinality <ul style="list-style-type: none">Beginning to subitise 1, to 6 on a dice.Links numerals with amounts up to 5.Count out up to 5 objects from a larger group Composition <ul style="list-style-type: none">Children are aware that although the number 5 can be split the whole number is still the same. Measurement <ul style="list-style-type: none">Able to say the days of the week and work out the day that comes after a given day. Pattern <ul style="list-style-type: none">To create, continue and correct repeating patterns of two repeating elements (AB). Shape <ul style="list-style-type: none">Recognise four or more shapes by their properties (including different triangles and rectangles, in a range of orientations).	
	<ul style="list-style-type: none">Adult to model counting throughout the day at transitions and during activities.Adult to model mathematical and prepositional language consistently throughout the dayAdult to point out numbers and shapes in the environment						
Planning	<ul style="list-style-type: none">Discussions at circle time while sharing baby photos and while making our own houses to include our house number and children's age.Action dice at circle time, adult to model and say how many.Introduce our visual time tableMemo to parents to encourage circle huntsCopy me with sticks at circle timeDiscussions at circle time about the properties of a circle. To encourage children to use their arm to create a big and small circle in the air.Adult to show children pictures of circles in various orientations in our environment.Adult led activity -Measuring children's height and comparing .	<ul style="list-style-type: none">Action dice at circle time with numbers 1 and 2.Introduce numbers 1 and 2 at carpet time after story.Encourage children to show 1 then 2 on their fingers. Adult to model.Discussions at carpet times about the properties of a rectangle. To encourage children draw a rectangle emphasising the 2 long sides and 2 short sides.Adult to show children pictures of rectangles in various orientations in familiar environments.Adult led activity – Adult to model a repeating pattern with beads on a shoe lace. Children to copy adults examples and attempt to create their own.Adult led activity – compare Bears, matching number with quantity 1 and 2.	<ul style="list-style-type: none">Action dice at circle time with numbers 1 ,2 and 3.Introduce number 3 at carpet time after story.Encourage children to show 3 on their fingers. Adult to model the different ways we can make 3.To introduce number 3 rhyme, encourage children to join in.Discussions at carpet times about the properties of a triangle. Encourage children to draw a triangle emphasising the 3 sides and 3 corners.Adult to show children pictures of triangles in various orientations in familiar environments.Copy me patterns with sticks at circle timeAdult led activity – compare Bears, matching number with quantity 1 to 3.Adult led activity- Story sequencing in 3 parts (Goldilocks and Ginger bread man)	<ul style="list-style-type: none">Action dice at circle time with number 4.Introduce number 4 at carpet time after story. Encourage children to show 4 on their fingers. Adult to model the different ways we can make 4.To draw number 4 in the air with their finger and say the sentence – down, across and chop it off.Gardening tuff spot – filling, emptying, matching amount of flowers to number on plant potDiscussions at carpet times about the properties of a square. Encourage children to draw a square emphasising the 4 sides and 4 corners.Adult to show children pictures of squares in various orientations in familiar environments.Adult led activity- Subitising and sharing out lady birds spots.Adult led activity – To copy and continue a repeating pattern drew onto an oval Easter egg shape.Adult led activity – Making Rise crispy Easter nests	<ul style="list-style-type: none">Action dice at circle time with number 5.Introduce number 5 at carpet time after story. Encourage children to show different ways of making 5 on fingers.To draw number 5 in the air with their finger and say the sentence – Across the top down the neck and around the tummy.Gardening tuff spot – filling, emptying, matching amount of flowers to number on plant potShape walks, in school environmentAdult led activity- Sequencing the life cycle of a caterpillar and The very hungry caterpillar story with props.Adult led activity- Matching bugs lottoAdult led activity – Ordering numbers on a sun flower	<ul style="list-style-type: none">Action dice at circle time with numbers 1- 5.5 tigers on parachute – subitising/more/lessRecap numbers 1-5 at carpet time after story.Encourage children to show different ways of making 5 on fingers.Ice cream parlour role play- using play moneyShape walks in school environmentDays of the week song traveling around the circle at circle timeAdult led activity- To create AB patterns with the Duplo to build carriages for the trainAdult led activity- Muffin tray subitisingAdult led activity – Making pictures with shapes of a variety of sizes and orientations.Adult led activity- board games using a dice.	

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Vocabulary	Round circle more less measure tallest shortest first - then visual time table	Rectangle, Long, short, sides, corners, one, two, pattern	Triangle Three Big Medium Small	Square Four Heavy Light weight	Five First Then Order Full Empty Match	Pence Pounds
Stories and Rhymes	Stories Count with Maisy Rhymes 1 little 2 little 3 little fingers Sleeping bunnies Baa baa black sheep 2	Stories 123 What can you see in Autumn Rhymes 12345 once I caught a fish alive 2 little dicky birds Miss Polly had a dolly 1 Hickory Dickory Dock	Stories Goldilocks and the 3 Bears Rhymes Goldilocks song 5 elephants went out to play Number 3 rhyme	Stories Counting with a ladybird Rhymes 5 little monkeys jumping on the bed 5 current buns	Stories The very Hungry Caterpillar Rhymes 5 little speckled frogs 5 little ducks	Stories Count the cars trains, trucks and planes Rhymes 5 aliens in a flying saucer

Reception	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Number Children at the expected level of development will:</p> <ul style="list-style-type: none">- Have an understanding of number to 10, linking names of numbers, numerals, their value, and their position in the counting order;- Subitise (recognise quantities without counting) up to 5;- Automatically recall number bonds for numbers 0-5 and for 10, including corresponding partitioning facts. <p>Numerical pattern Children at the expected level of development will:</p> <ul style="list-style-type: none">- Automatically recall double facts up to 5+5;- Compare sets of objects up to 10 in different contexts, considering size and difference;- Explore patterns of numbers within numbers up to 10, including evens and odds.						
Progression of skills and knowledge	<p>AB patterns (Continue, copy, fix, create own)</p> <p>Subitising</p> <ul style="list-style-type: none">- perceptually subitise within 3-identify sub-groups in larger arrangements-create their own patterns for numbers within 4-practise using their fingers to represent quantities which they can subitise-experience subitising in a range of contexts, including temporal patterns made by sounds. <p>Counting, ordinality and cardinality</p> <ul style="list-style-type: none">-relate the counting sequence to cardinality, seeing that the last number spoken gives the number in the entire set-have a wide range of opportunities to develop their knowledge of the counting sequence, including through rhyme and song-have a wide range of opportunities to develop 1:1 correspondence, including by coordinating movement and counting-have opportunities to develop an understanding that anything can be counted, including actions and sounds <p>Composition</p> <ul style="list-style-type: none">-explore a range of strategies which support accurate counting <p>Composition</p> <ul style="list-style-type: none">-see that all numbers can be made of 1s-compose their own collections within 4. <p>Comparison</p> <ul style="list-style-type: none">-understand that sets can be compared according to a range of attributes, including by their numerosity-use the language of comparison, including ‘more than’ and ‘fewer than’compare sets ‘just by looking’.	<p>AB and ABB, ABC, AAB patterns (Continue, copy, fix, create own)</p> <p>Subitising</p> <ul style="list-style-type: none">-subitise within 5, perceptually and conceptually, depending on the arrangements. <p>Counting, ordinality and cardinality</p> <ul style="list-style-type: none">-continue to develop their counting skills-explore the cardinality of 5, linking this to dice patterns and 5 fingers on 1 hand-begin to count beyond 5-begin to recognise numerals, relating these to quantities they can subitise and count. <p>Composition</p> <ul style="list-style-type: none">-explore the concept of ‘wholes’ and ‘parts’ by looking at a range of objects that are composed of parts, some of which can be taken apart and some of which cannot-explore the composition of numbers within 5. <p>Comparison</p> <ul style="list-style-type: none">-compare sets using a variety of strategies, including ‘just by looking’, by subitising and by matching-compare sets by matching, seeing that when every object in a set can be matched to one in the other set, they contain the same number and are equal amounts-	<p>Shape and spatial reasoning</p> <p>Subitising</p> <ul style="list-style-type: none">-increase confidence in subitising by continuing to explore patterns within 5, including structured and random arrangements-explore a range of patterns made by some numbers greater than 5, including structured patterns in which 5 is a clear part-experience patterns which show a small group and ‘1 more’continue to match arrangements to finger patterns <p>Counting, ordinality and cardinality</p> <ul style="list-style-type: none">-continue to develop verbal counting to 20 and beyond-continue to develop object counting skills, using a range of strategies to develop accuracy-continue to link counting to cardinality, including using their fingers to represent quantities between 5 and 10-order numbers, linking cardinal and ordinal representations of number. <p>Composition</p> <ul style="list-style-type: none">-continue to explore the composition of 5 and practise recalling ‘missing’ or ‘hidden’ parts for 5-explore the composition of 6, linking this to familiar patterns, including symmetrical patterns-begin to see that numbers within 10 can be composed of ‘5 and a bit’ <p>Comparison</p> <ul style="list-style-type: none">-continue to compare sets using the language of comparison, and play games which involve comparing sets-continue to compare sets by matching, identifying when sets are equal-explore ways of making unequal sets equal.	<p>Shape and spatial reasoning</p> <p>Subitising</p> <ul style="list-style-type: none">-explore symmetrical patterns, in which each side is a familiar pattern, linking this to ‘doubles’. <p>Counting, ordinality and cardinality</p> <ul style="list-style-type: none">-continue to consolidate their understanding of cardinality, working with larger numbers within 10-become more familiar with the counting pattern beyond 20. <p>Composition</p> <ul style="list-style-type: none">-explore the composition of odd and even numbers, looking at the ‘shape’ of these numbers-begin to link even numbers to doubles-begin to explore the composition of numbers within 10. <p>Comparison</p> <ul style="list-style-type: none">-compare numbers, reasoning about which is more, using both an understanding of the ‘howmanyness’ of a number, and its position in the number system.	<p>Size and measure</p> <p>ABB0/AAB patterns (Continue, copy, fix, create own)</p> <p>Subitising</p> <ul style="list-style-type: none">-continue to practise increasingly familiar subitising arrangements, including those which expose ‘1 more’ or ‘doubles’ patterns-use subitising skills to enable them to identify when patterns show the same number but in a different arrangement, or when patterns are similar but have a different number-subitise structured and unstructured patterns, including those which show numbers within 10, in relation to 5 and 10-be encouraged to identify when it is appropriate to count and when groups can be subitised. <p>Counting, ordinality and cardinality</p> <ul style="list-style-type: none">-continue to develop verbal counting to 20 and beyond, including counting from different starting numbers-continue to develop confidence and accuracy in both verbal and object counting. <p>Composition</p> <p>explore the composition of 10.</p> <p>Comparison</p> <ul style="list-style-type: none">-order sets of objects, linking this to their understanding of the ordinal number system.	
Planning	<p>5 rules of counting</p> <p>Number sense 1-4</p> <ul style="list-style-type: none">- Recognising different representations- Understand number line placement- Subitise to 4	<p>Embed number sense 1-4</p> <p>Number sense 1-5</p> <ul style="list-style-type: none">- Recognising different representations- Understand number line placement- Subitise to 5	<p>Embed number sense 1-5</p> <p>Number sense 6-7</p> <ul style="list-style-type: none">- Recognising different representations- Understand number line placement- Use a range of resources to partition numbers to 6-7	<p>Embed number sense 1-7</p> <p>Number sense 8-9</p> <ul style="list-style-type: none">- Recognising different representations- Understand number line placement- Use a range of resources to partition numbers to 6-9	<p>Embed Number sense 6-9</p> <p>Number sense 10</p> <ul style="list-style-type: none">- Recognising different representations- Understand number line placement- Use a range of resources to partition numbers to 10	<p>Embed Number sense 10 and Use strategies to subtract within 10</p> <p>Understanding of numerical patterns</p> <ul style="list-style-type: none">- Odds and evens- Teen numbers- Tens

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	<ul style="list-style-type: none">- Use a range of resources to partition numbers to 4- Use number bonds to 4 to solve mathematical problems- Shape properties <p>Pattern Bugs book exploring AB pattern</p>	<ul style="list-style-type: none">- Use a range of resources to partition numbers to 5- Use number bonds to 5 to solve mathematical problems- Shape properties <p>Numerical patterns</p> <ul style="list-style-type: none">- adding 1 each time- number staircase- one less/fewer- <p>Pattern Bugs book exploring ABB, ABC pattern</p>	<ul style="list-style-type: none">- Use number bonds 1-5 to solve mathematical problems	<ul style="list-style-type: none">- Use number bonds 1-9 to solve mathematical problems	<ul style="list-style-type: none">- Use number bonds 1-10 to solve mathematical problems <p>Understanding of numerical patterns</p> <ul style="list-style-type: none">- Halving/sharing- Doubling	
Vocabulary	Numbers 1-5 count Subitise Representation Numeral Partition	Less Fewer More Biggest Smallest Pattern, repeating Number staircase	Compare Same Different Days of the week Group Flat Round Curved Straight	Sort Equal Estimate Full Empty	Double Half/halve Sharing Length, height, width Long, short, tall Weigh Weight Balance Heavy Light Depth	Odd Even Difference
Stories and Rhymes	Pattern Bugs (pattern) Birthday Beeps and Boops (pattern) Counting Creatures (counting) Triangle (shape) Fish Alive! Five little men in flying saucers	Pete the Cat and his Four Groovy Buttons (one fewer) Roosters Off to See the World (number staircase) Pattern Bugs (pattern) Five Little Ducks Five little speckled frogs	Quack and Count (7) Jack Hartman –Number Bonds 6 song	Fair Shares (sharing) The Perfect Fit (shape) Tangram Cat (spatial reasoning) Pattern Fish (pattern)	A Balancing Act How much does a ladybird weigh? (weight) 10 little monkeys 10 green bottles 10 fat sausages	One Odd Day (odd and even Ten Little.... (pirates, monsters, monkeys) Elevator Magic (subtraction from 10) Grandfather Owl: Adding and Subtracting Below 10 Have You Seen My Dragon? (10) One Is a Snail, Ten Is a Crab The Hundred Decker Bus/Rocket Centipede's 100 shoes
Outcomes	Number representation book Natural material patterns	Poster of 5 Whole class mathematical graphic books on numerical patterns	Quack and Count story book	Tangram animals Poster about 8	Create board games	E-book about 10