PROGRESSION MAP- MATHEMATICS

Early Years	National Curriculum strands	
Counting		
EYFS	**Year One**	**Year Two**
Mathematical Vocabulary Three and Four-Year-Olds Communication and Language • Use a wider range of vocabulary. • Understand 'why' questions, like: "why do you think the caterpillar is so fat?" Reception Communication and Language • Learn new vocabulary. • Use new vocabulary throughout the day. ELG Communication and Language Speaking • Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary Three and Four-Year-Olds • Recite numbers past 5. • Say one number name for 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'). Reception • Count objects, actions and sounds. • Count beyond ten. ELG Mathematics Numerical Patterns • Verbally count beyond 20, recognising the pattern of the counting system	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Read and write numbers to 100 in numerals, count in different multiples including ones, twos, fives and tens. Identify one more and one less to 100. Identify and represent numbers using concrete objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most and least.	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward Read and write numbers to at least 100 in numerals and words.
Counting mathematical vocabulary		
EYFS	**Year 1**	**Year 2**

Three and Four-Year-Olds • Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Show 'finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals. Reception • Subitise. • Link the number symbol (numeral) with its cardinal number value **ELG** • Subitise (recognising without counting) up to 5.	digit number names-zero-one hundred count in ones, twos… tens… more, less, many, few odd, even every other how many times? pattern, pair	Count on/back in ones, twos, threes, fours, fives… count in tens more, less, many, few tally multiple of sequence, continue, predict, rule
Place Value and Numbers		
EYFS	**Year 1**	**Year 2**
Three and Four-Year-Olds • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals. Reception • Link the number symbol (numeral) with its cardinal number value. Compare and Order Numbers Three and Four-Year-Olds • Compare quantities using language: 'more than', 'fewer than'. Reception • Compare numbers. ELG Mathematics Numerical Patterns • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Understanding Place Value Reception Mathematics • Understand the 'one more than/one less than' relationship between consecutive numbers.	To represent numbers to 20 and to know which numbers are odd or even. Read and write numbers from 1 to 20 in digits and words. To know the place value of numbers to 100. Using concrete representations. Count, read and write numbers to 100 in numerals, count in different multiples including ones, twos, fives and tens	Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations, including the number line

• Explore the composition of numbers to 10. **ELG** Mathematics Number • Have a deep understanding of numbers to 10, including the composition of each		
Place value –Mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
Number names 0-5 0-10 More, less	Tens, units, ones exchange digit 'teens' number 'ty' numbers Before after Place value stands for, represents one more, ten more one less, ten less commutativity	the same number as, as many as equal to greater, more, larger, bigger less, fewer, smaller compare order first, second, third… tenth… before, after next between, half-way between above, below different combination commutativity rule
Equal		
EYFS	**Year 1**	**Year 2**
Compare two groups which group have the same/equal amount of objects?	To compare two groups of objects and use the vocabulary equal and unequal, more and less. Read, write and interpret mathematical statements involving addition the equals (=) sign.	To use the equal sign at the beginning or at the end of a number sentence calculation. To use the equal sign between concrete, pictorial and abstract representations to show both sides are equal. Compare and order numbers from 0 up to 100; use <, > and = signs
Equal Mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
Same equal different	is not equal is equals, sign,	as many as equal to, exact, exactly □□□equals, sign,
Addition		
EYFS	**Year 1**	**Year 2**
Reception Mathematics • Automatically recall number bonds for numbers 0-5 and some to 10. **ELG** Mathematics Number • 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.	Read, write and interpret mathematical statements involving addition (+) sign. Represent and use number bonds and related addition facts to 20.	Use concrete objects and pictorial representations, including those involving numbers, quantities and measures to show an addition calculation. Apply mental and written methods with increasing knowledge.

	Add two one-digit and two-digit numbers to 20 (9 + 9, 11 + 5), including zero.	Recall and use addition and subtraction facts fluently, and derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: A two digit number and ones, a two digit number and tens, two digit numbers, adding three one-digit numbers. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.
Addition- Mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
Add, and, more, altogether	+, plus Is equal to how much more is…? Bar model, part, part whole Number sentence Fact family Number bonds commutativity	near double commutativity rule
Subtraction		
EYFS	**Year 1**	**Year 2**
See addition	Read, write and interpret mathematical statements involving subtraction (-)) sign. Represent and use number bonds and related subtraction facts to 20. Subtract one-digit and two-digit numbers to 20 (8 – 4, 18 - 9), including zero.	Use concrete objects and pictorial representations, including those involving numbers, quantities and measures to show an addition calculation. Apply mental and written methods with increasing knowledge. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two digit number and ones, a two digit number and tens, two digit numbers, adding three one-digit numbers Recall and use addition and subtraction facts fluently, and derive and use related facts up to 100. Recognize and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing numbers.
Subtraction- mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
Take away, less, how many left	□□□subtract, minus ten less	subtraction one hundred less

	how much less is…? difference between, half, halve □□□equals, sign,	tens boundary
Multiplication and Division		
EYFS	**Year 1**	**Year 2**
	Count in 2s, 5s and 10s. Double numbers to 10. Group and share small quantities of objects.	Apply mental and written methods with increasing knowledge. Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. Apply mental and written methods with increasing knowledge. Recall and use division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.
Multiplication and Division- mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
	Lots of, times, repeated addition, array, not equally How many? Once, twice, three times. Five times. Count in tens (forwards from/ backwards from) How many times? Lots of, groups of , multiple of, times, multiply, multiply by, repeated addition Array, row, column, group in twos, threes, etc Divided by,	multiple of, once, twice, three times… ten times… times as one each, two each, three each… group in pairs, threes… tens equal groups of, divide, divided by, divided into left, left over
Reasoning and Problem solving		
EYFS	**Year 1**	**Year 2**
ELG Mathematics Numerical Patterns	Solve simple one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems.	Use place value and number facts to solve problems. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly	Solve simple one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Use concrete objects and pictorial representations, including those involving numbers, quantities and measures to solve problems. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Reasoning and Problem solving- mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
Patterns Three and Four-Year-Olds • 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. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern. Reception • Continue, copy and create repeating patterns.	What do you notice? This is not correct because….. This is correct because….. Explain Pattern The same, different True, false Correct Why? How? Show me	Explain your reasoning? This statement is ……. More efficient strategy
Fraction		
EYFS	**Year 1**	**Year 2**
	Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. Find $^1/_2$ and $^1/_4$ as operators on discrete and continuous quantities by solving problems using shapes, objects and quantities.	Recognise, find, name and write fractions $^1/_3$, $^1/_4$, $^2/_4$ and $^3/_4$ of a length, shape, set of objects or quantity Write simple fractions e.g. $^1/_2$ of 6 = 3 and recognise the equivalence of $^2/_4$ and $^1/_2$.
Fraction mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
Whole, equal, half, share, same, not the same	Whole ,half, quarter Share, equal parts, not equal part four equal parts Two halves, a quarter, two quarters	part, equal parts, fraction, one whole, one half, two halves, one quarter, two quarters, three…four …. Quarters, one third, a third, equivalent
Measures		
EYFS	**Year 1**	**Year 2**
Three and Four-Year-Olds • Make comparisons between objects relating to size, length, weight and capacity. Reception • Compare length, weight and capacity.	Compare, describe and solve practical problems for lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half). Compare, describe and solve practical problems for capacity/volume (full/empty, more than, less than, quarter).	Choose and use appropriate standards units to estimate and measure length/height in any direction (m/cm; mass (kg/g); temperature ; capacity (l/ml\\\0 to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.

	Recognise and know the value of different denominations of coins and notes Compare, describe and solve practical problems for mass or weight (e.g. heavy/light, heavier than, lighter than). Compare, describe and solve practical problems for time (quicker, slower, earlier, later). Measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time (hours, minutes, seconds). Tell the time to o' clock and half past the hour and draw hands on a clock face to show these times. Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. Recognise and use language relating to dates, including days of the week, weeks, months and years.	Compare and order lengths, mass, volume/capacity and record the results using <,> and = Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. Compare and sequence intervals of time. Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face and show these time. Know the number of minutes in an hour and the number of hours in a day.
Measures mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
Three and Four-Year-Olds Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then…	**General-EYFS** **Length** length, width, height, depth long, short, tall high, low wide, narrow deep, shallow thick, thin longer, shorter, taller, higher… and so on longest, shortest, tallest, highest… and so on far, near, close metre ruler, metre stick **Mass** weigh, weighs, balances heavy/light, heavier/lighter, heaviest/lightest balance, scales, weight **Capacity** Full, half full, empty, holds, container	**General- EYFS and Year 1** measuring scale **Length** far, further, furthest, near, close metre (m), centimetre (cm) tape measure **Mass** kilogram (kg), half-kilogram, gram (g) **Capacity** contains litre (l), half-litre, millilitre (ml) container
Geometry		
EYFS	**Year 1**	**Year 2**
Three and Four-Year-Olds • Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids)	Recognize 2-D and 3D shapes(rectangles (including squares), circles and triangles, cuboids(including cubes), pyramids and spheres.	Identify and describe the properties of 2-D shapes, including the number of sides and line of symmetry in a vertical line.

using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'. • Select shapes appropriately: flat surfaces for a building, a triangular pattern for a roof, etc. • Combine shapes to make new ones – an arch, a bigger triangle, etc. Reception • Select, rotate and manipulate shapes in order to develop spatial reasoning skills. Compare and Classify Shapes Reception • Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can. **Position and direction** Three to four year olds Understand positions through words alone. For example, 'The bag in under the table'. Describe a familiar route. Discuss route and location, using words like in front and behind	Recognise the above shapes in different orientations. Order and arrange combinations of objects and shapes in patterns. Describe position, directions and movements, including half, quarter and three-quarter turns (clockwise direction).	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid). Compare and sort common 2-D and 3-D shapes and everyday objects. Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three- quarter turns (clockwise and anti-clockwise).
Geometry- mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
Circle, square, rectangle, triangle cube, cuboid 2D, 3D Sides Corners, straight, flat round	Shape, pattern, flat, curved, straight, round, hollow, solid, corner, point, pointed, face, side, edge, vertices, make, build draw, sort **3D Shapes** Cube, cuboid, pyramid, sphere, cone, cylinder **2D Shapes** Circle, triangle, square, rectangle, star	Shape, pattern, flat, curved, straight, round, hollow, solid, corner, point, pointed, face, side, edge, vertices, make, build draw, sort, surface **3D Shapes** Cube, cuboid, pyramid, sphere, cone, cylinder **2D Shapes** circle, circular triangle, triangular square rectangle, rectangular star pentagon hexagon octagon
Data handling		
EYFS	**Year 1**	**Year 2**
Three and Four-Year-Olds • Experiment with their own symbols and marks, as well as numerals.	Construct tables, pictograms Ask and answer questions	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparting categorical data
Data handling- mathematical vocabulary		
EYFS	**Year 1**	**Year 2**

Sort, group	count, sort, vote group, set list same, different table	count, tally, sort, vote graph, block graph, pictogram represent group, set same, different list, table label, title most popular, most common least popular, least common
Number line		
EYFS	**Year 1**	**Year 2**
	To use concrete pictorial and abstract number lines and to place objects on the number line to represent number order. To add and subtract on a number line using jumps. To use concrete, pictorial and abstract number lines to count on and back in 1s, 2s, 5s and 10s.	To use jumps of Tens and Ones to add and subtract on a number line. To use a more efficient strategy of using only one jump to represent the Tens and Ones to add and subtract. To use the number line to represent the repeated addition in a multiplication calculation for the 2x, 5x and 10x table.
Number line- mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
	Count on, count back, numbers 0-100, more, less, bigger, smaller, Tens, Ones, count on/back in 1s, 2s, 5s and 10s Jumps on/back	track, jumps, more efficient strategy
Bar Model and Part, part whole model		
EYFS	**Year 1**	**Year 2**
	To use concrete, pictorial and abstract bar models to represent number bond facts. To use CPA bar models to add and numbers to 20. To use the bar model to represent double or half of a number. Introduce the vocab commutativity	To use the CPA bar model to add and subtract numbers to 100. To use a bar model to represent half, two quarters, one third and two third, quarter and three quarters of a number.
Bar Model and Part, part whole-mathematical vocabulary		
EYFS	**Year 1**	**Year 2**
	missing part, add, make, subtract, take away, missing whole/part, equals, makes	Whole, part, bigger, smaller, altogether, missing part, add, make, subtract, take away, missing whole/part, equals, makes, equivalent, minus, equal to, same as, does the commutativity law apply? Why not? Explain