Mathematics Progression 2023-2024

		Nursery	Reception	Year 1	Year 2	Year 3 (what comes next)
Place Value	Count	→ Recite numbers past 5. → Say one number 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').	→ Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). → Count objects, actions and sounds. → Subitise. → Count beyond ten. · **ELG** Subitise up to 5. · 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. → Count numbers to 100 in numerals; count in multiples of twos, fives and tens.	→ Count in steps of 2, 3 and 5 from 0, and in tens from any given number, forwards and backwards.	→ Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number.
	Represent	→ 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.	→ Link the number symbol (numeral) with its cardinal number value.	→ Identify and represent numbers using objects and pictorial representations. → Read and write numbers to 100 in numerals. → Read and write numbers from 1 to 20 in numerals and words.	→ Read and write numbers to at least 100 in numerals and words. → Identify, represent and estimate numbers using different representations, including the number line.	→ Identify, represent and estimate numbers using different representations. → Read and write numbers up to 1000 in numerals and in words.

	Use and compare	→ Compare quantities using language: 'more than', 'fewer than'. → Make comparisons between objects relating to size, length, weight and capacity.	→ Compare numbers → Understand the 'one more than/one less than' relationship between consecutive numbers. · **ELG.** Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.	→ Given a number, identify one more and one less.	→ Recognise the place value of each digit in a two-digit number. → Compare and order numbers from 0 up to 100; use < > and = signs.	→ Recognise the place value of each digit in a three digit number. → Compare and order numbers up to 1000.
	Problems/ Rounding	→ Solve real world mathematical problems with numbers up to 5.	→ Solve real world mathematical problems with numbers up to 5.		→ Use place value and number facts to solve problems.	→ Solve number problems and practical problems involving these ideas.
Addition and Subtraction	**Calculations**	→ Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').	→ Explore the composition of numbers to 10. → Automatically recall number bonds for numbers 0–5 and some to 10. · **ELG** Have a deep understanding of number to 10, including the composition of each number. · Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to	→ Add and subtract one-digit and two-digit numbers to 20, including zero.	→ 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 two-digit numbers → Adding three one-digit numbers.	→ Add and subtract numbers mentally including; → A three-digit number and ones → A three-digit number and tens → A three-digit number and hundreds → Add and subtract numbers with up to three digits, using formal written methods.

			10, including double facts. · Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.			
	Problems			→ Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7=? +9	→ Solve one step problems and addition and subtraction: → Using concrete objects and pictorial representations, including those involving numbers, quantities and measures → Applying their increasing knowledge of mental and written methods.	→ Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.

Multiplication and Division	**Recall/Use**				→ Recall and use multiplication and division facts for the 2, 5 and 10 tables, including recognising odd and even numbers. → Show that multiplication of two numbers can be done in any order and division of one number by another cannot.	→ Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.

	Calculations				→ Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.	→ Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
	Problems			→ Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	→ Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	→ Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to objects.

Fractions	Recognise and write			→ 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.	→ Recognise, find, name and write fractions, one third, one quarter, 2 quarters and 3 quarters of a length, shape, set of objects or quantity.	→ Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 → Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators

						→ Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
	Compare				→ Recognise the equivalence of 2 quarters and 1 half.	→ Recognise and show, using diagrams, equivalent fractions with small denominators → Compare and order unit fractions, and fractions with the same denominators
	Calculations				→ Write simple fractions, for example $\frac{1}{2}$ of 6 = 3.	→ Add and subtract fractions with the same denominator within one whole.
Algebra	Algebra			→ Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = c – 9	→ Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	→ Solve problems, including missing number problems
Measurement	Measures	→ Make comparisons between objects relating to size, length, weight and capacity.	→ Compare length, weight and capacity.	→ Compare, describe and solve practical problems for: Ø lengths and heights Ø mass/weight Ø capacity and volume Ø time	→ Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C);	→ Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

				→ Measure and begin to record the following: Ø lengths and heights Ø mass/weight Ø capacity and volume Ø time (hours, minutes, seconds)	capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels → Compare and order lengths, mass, volume/capacity and record the results using >, < and =	
	Money			→ Recognise and know the value of different denominations of coins and notes	→ 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	→ Add and subtract amounts of money to give change, using both £ and p in practical contexts

	Time	→ Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…'	→ Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then…'	→ Sequence events in chronological order using language [for example, 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 → Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	→ 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 to show these times → Know the number of minutes in an hour and the number of hours in a day	→ Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks → Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight → Know the number of seconds in a minute and the number of days in each month, year and leap year Compare durations of events [for example to calculate the time taken by particular events or tasks]
Geometry	2D Shape	→ Talk about and explore 2D and 3D shapes circles, cuboids, rectangles and triangles using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. → Select shapes appropriately:	→ Select, rotate and manipulate shapes in order to develop spatial reasoning skills. → Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.	→ Recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles]	→ Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line → Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and	→ Draw 2-D shapes.

		flat surfaces for building, a triangular prism for a roof, etc. → Combine shapes to make new ones – an arch, a bigger triangle, etc.			a triangle on a pyramid] → Compare and sort common 2-D shapes and everyday objects	
	3D shape			→ Recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	→ Recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] → Compare and sort common 3-D shapes and everyday objects	→ Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
	Position and direction	→ 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'.	→ Continued from Nursery	→ Describe position, direction and movement, including whole, half, quarter and three-quarter turns	→ Order and arrange combinations of mathematical objects in patterns and sequences → 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 anticlockwise)	

Statistics	Present and interpret data				→ Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	→ Interpret and present data using bar charts, pictograms and tables
	Solve statistical problems				→ 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 comparing categorical data	→ Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables