

Maths Skills Progression Map



Place Value

	Subitising	Counting	Represent	Use PV and compare	Problems and Rounding
Preschool (Birth to Three)	Take part in finger rhymes with numbers.	Develop counting-like behaviour such as making sounds, pointing or saying some number names in sequence. Counts in everyday contexts, sometimes skipping numbers 1,2,3,5	Take part in finger rhymes with numbers.	Reacts to changes in amount in a group of up to 3 objects. Compare amounts saying 'lots', 'more' or 'same'.	
Nursery (Three and Four Year Olds)	Develop fast recognition of up to 3 objects, without having to count them individually Show 'finger numbers' up to 5.	Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Knows that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle)	Experiment with their own symbols and marks as well as numerals. Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.	Compare quantities using language: 'more than', 'fewer than'.	Solve real world mathematical problems with numbers up to 5.
Reception ELG in bold	Subitise up to 5.	Count objects, actions and sounds. Count beyond 10. Verbally count beyond 20, recognising the pattern of the counting system.	Link the number symbol (numeral) with its cardinal number value.	Compare numbers. Understand the 'one more than/ one less than' relationship between consecutive numbers. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.	
Year 1		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.	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.	Given a number identify one more and one less.	

Year 2		Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.	Read and write numbers to at least 100 in numerals and words. Identify, represent and estimate numbers using different representations, including the number line.	Recognise the place value of each digit in a two-digit number (tens, ones). Compare and order numbers from 0 up to 100; use < , > and = signs.	Use place value and number facts to solve problems.
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Addition and Subtraction

	Recall, Represent, Use	Calculations	Solve Problems
Preschool (Birth to Three)			
Nursery (Three and Four Year Olds)			
Reception ELG in bold	Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0-5 and some to 10. Have a deep understanding of numbers 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 10, including doubles.		
Year 1	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and (=) signs. Represent and use number bonds and related subtraction facts within 20.	Add and subtract one-digit and two-digit numbers to 20, including zero.	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$.
Year 2	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	Add and subtract numbers using concrete objects, pictorial representations and mentally, including: <ul style="list-style-type: none"> ❖ A two-digit number and ones ❖ A two-digit number and tens ❖ Two two-digit numbers ❖ Adding three one-digit numbers. 	Solve problems with addition and subtraction: <ul style="list-style-type: none"> ❖ Using concrete objects and pictorial representations, including those involving numbers, quantities and measures.

	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.		❖ Applying their increasing knowledge of mental and written methods.
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Multiplication and Division

	Recall, Represent, Use	Calculations	Solve Problems
Preschool (Birth to Three)			
Nursery (Three and Four Year Olds)			
Reception ELG in bold	Automatically recall double facts. Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.		
Year 1			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.
Year 2	Recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognizing 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.	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and (=) signs.	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

Fractions, Decimals and Percentages

	Fractions- Recognise and Write	Fractions- Compare	Fractions- Calculations
Preschool (Birth to Three)			
Nursery (Three and Four Year Olds)			
Reception ELG in bold	Explore how quantities can be distributed evenly.		
Year 1	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.		
Year 2	Recognise, find name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, and $\frac{3}{4}$ of a length, shape, set of objects or quantity.	Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	Write simple fractions for example, $\frac{1}{2}$ of $6 = 3$.

Measurement

	Using Measures	Money	Time
Preschool (Birth to Three)	Compare sizes, weights etc using gesture and language-'bigger/little/smaller', 'high/low', 'tall', 'heavy'.		
Nursery (Three and Four Year Olds)	Make comparisons between objects relating to size, length, weight and capacity.		Describe a familiar routine. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'.
Reception ELG in bold	Compare length, weight and capacity.		
Year 1	Compare, describe and solve practical problems for: <ul style="list-style-type: none"> ➤ Lengths and heights ➤ Mass/weight ➤ Capacity and volume ➤ Time Measure and begin to record the following:	Recognise and know the value of different coins and notes.	Sequence events in chronological order using language. Recognise and use language relating to dates, including days of the week, weeks, months and years.

	<ul style="list-style-type: none"> ➤ Lengths and heights ➤ Mass/weight ➤ Capacity and volume ➤ Time (hours, minutes, seconds) 		Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.
Year 2	<p>Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.</p> <p>Compare and order lengths, mass, volume/capacity and record the results using >, < and =.</p>	<p>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.</p> <p>Find different combinations of coins that equal the same amounts of money.</p> <p>Solve simple problems in a practical context involving addition and subtraction of money in the same unit, including giving change.</p>	<p>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.</p> <p>Know the number of minutes in an hour and the number of hours in a day.</p>

Geometry

	2D Shapes	3D shapes	Pattern	Position and Direction
Preschool (Birth to Three)	Combine objects like stacking blocks and cups. Put objects inside others and take them out again.		Notice patterns and arrange things in patterns.	Climb and squeeze themselves into different types of spaces. Complete insert puzzles.
Nursery (Three and Four Year Olds)	Talk about and explore 2D shapes using informal and mathematical language. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones.	Talk about and explore 3D shapes using informal and mathematical language. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.	Talks about and identifies the patterns around them. Extend and create ABAB patterns. Notice and correct an error in a repeating pattern.	Understand position through words alone- with no pointing. Describe routes and locations, using words like 'in front of' and 'behind'.
Reception ELG in bold	Select, rotate and manipulate shapes in order to develop spatial reasoning skills. Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.	Select, rotate and manipulate shapes in order to develop spatial reasoning skills.	Continue, copy and create repeating patterns.	

Year 1	Recognise and name common 2D shapes.	Recognise and name common 3D shapes.		Describe position, direction and movement, including whole, half, quarter and three-quarter turns.
Year 2	Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. Identify 2D shapes on the surface of 3D shapes. Compare and sort common 2D shapes and everyday objects.	Recognise and name common 3D shapes. Compare and sort common 3D shapes and everyday objects.	Order and arrange combinations of mathematical objects in patterns and sequences.	Use mathematical vocabulary to describe position, direction and movement, including 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).

Statistics (Year 2 only)

	Present and interpret	Solve problems
Year 2	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.	Ask and answer questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totaling and comparing categorical data.