# Mathematics Progression of Skills

| | EYFS<br>3 & 4 year olds<br>Reception<br>**ELG** | Year 1 | Year 2 | Year 3 |
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| **Number and Place Value** | | | | |
| | Can I develop fast recognition of up to 3 objects, without having to count them individually ('subitising')?<br>Can I recite numbers past 5?<br>Can I say one number for each item in order: 1,2,3,4,5?<br>Can I understand that the last number reached when counting a small set of objects tells me how many there are in total ('cardinal principle')?<br>Can I show 'finger numbers' up to 5?<br>Can I link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5?<br>Can I count objects, actions and sounds?<br>Can I subitise?<br>Can I link the number symbol (numeral) with its cardinal number value?<br>Can I understand numbers to 10, including the composition of each number? | 1N1a<br>Can I count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number?<br>1N2b<br>Can I count in multiples of 2, 5 and 10? | 2N1<br><br>Can I count in multiples of 2, 3, and 5 from 0, and in 10 from any number, forward and backward? | Can I count from 0 in multiples of 4, 8, 50 and 100?<br><br>Can I find 10 or 100 more or less than a given number? |

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| | Can I subitise (recognise quantities without counting) up to 5?<br>Can I 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?<br>Can I verbally count beyond 20, recognising the pattern of the counting system? | | | |
| | Can I experiment with my own symbols and marks as well as numerals? | 1N2a<br>Can I count, read and write numbers to 100 in numerals?<br>1N2c<br>Can I read and write numbers from 1 to 20 in numerals and words? | 2N2a<br><br>Can I read and write numbers to at least 100 in numerals and in words? | Can I read and write numbers up to 1000 in numerals and in words? |
| | Can I compare quantities using language: 'more than', 'fewer than'?<br>Can I compare numbers?<br>Can I understand the 'one more than/one less than' relationship between consecutive numbers?<br>Can I compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity? | 1N2b<br>Can I, given a number, identify 1 more and 1 less? | 2N2b<br><br>Can I compare and order numbers from 0 up to 100; use <, > and = signs? | Can I compare and order numbers up to 1000? |

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| | Can I explore the composition of numbers to 10?<br>Can I count beyond ten?<br>Can I explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally? | | 2N3<br><br>Can I recognise the place value of each digit in a two-digit number (tens, ones)? | Can I recognise the place value of each digit in a three-digit number (hundreds, tens, ones)? |
| | | | 2N4<br><br>Can I identify, represent and estimate numbers using different representations, including the number line? | |
| | | | 2N6<br><br>Can I use place value and number facts to solve problems? | Can I solve number problems and practical problems involving these ideas? |
| **Calculations** | | | | |
| | Can I automatically recall number bonds for numbers 0–5 and some to 10? | 1C1<br><br>Can I represent and use number bonds and related subtraction facts within 20? | 2C1<br>Can I recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100? | |

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| | | 1C2a<br>Can I add and subtract one-digit and two-digit numbers to 20, including 0? | 2C2a<br>Can I add and subtract numbers using concrete objects, pictorial representations, and mentally, including:<br>• a two-digit number and 1s<br>• a two-digit number and 10s<br>• 2 two-digit numbers<br>• adding 3 one-digit numbers? | Can I add and subtract numbers mentally, including:<br>* a three-digit number and ones<br>* a three-digit number and tens<br>* a three-digit number and hundreds? |
| | | | 2C3<br>Can I recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems? | Can I estimate the answer to a calculation and use inverse operations to check answers? |
| | Can I solve real world mathematical problems with numbers up to 5? | 1C4<br>Can I solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? – 9? | 2C4<br>Can I solve problems with addition and subtraction?<br><br>Can I use concrete objects and pictorial representations, including those involving numbers, quantities and measures?<br><br>Can I apply an increasing knowledge of mental and written methods? | Can I solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction?<br><br>Can I add and subtract numbers with up to three digits, using formal written methods of column addition and subtraction? |
| | | | 2C9a<br>Can I show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot? | |

# Mathematics Progression of Skills

| Multiplication and Division | | | | |
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| | | | 2C6<br>Can I recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers? | Can I recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables? |
| | | | 2C7<br>Can I calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs? | Can I 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? |
| | | 1C8<br>Can I solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays? | 2C8<br>Can I solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts? | Can I 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 m objects? |
| | | | 2C9b<br>Can I show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot? | |

# Mathematics Progression of Skills

| **Fractions** | | | | |
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| | | 1F1a<br>Can I recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity? | 2F1a<br>Can I recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity? | Can I recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators?<br><br>Can I recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10? |
| | | 1F1b<br>Can I recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity? | 2F1b<br>Can I write simple fractions, for example 1/2 of 6 = 3? | |
| | | | 2F2<br>Can I recognise the equivalence of 2/4 and ½? | Can I compare and order unit fractions, and fractions with the same denominators? |
| | | | | Can I add and subtract fractions with the same denominator within one whole (e.g. $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$)?<br>Can I solve problems using all the above? |

# Mathematics Progression of Skills

| Measures | | | |
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| Can I make comparisons between objects relating to size, length, weight and capacity?<br><br>Can I compare length, weight and capacity? | 1M1<br>Can I compare, describe and solve practical problems for:<br>• lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]<br>• mass/weight [for example, heavy/light, heavier than, lighter than]<br>• capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]<br>• time [for example, quicker, slower, earlier, later]<br>using std and non-std units? | 2M1<br>Can I compare and order lengths, mass, volume/capacity and record the results using >, < and =? | |
| | 1M2<br>Can I measure and begin to record the following:<br>• lengths and heights<br>• mass/weight<br>• capacity and volume<br>• time (hours, minutes, seconds)? | 2M2<br>Can I 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? | Can I measure, compare, add and subtract: **lengths** (m/cm/mm); **mass** (kg/g); **volume/capacity** (l/ml)?<br><br>Can I measure the **perimeter** of simple 2-D shapes? |
| | 1M3<br>Can I recognise and know the value of different denominations of coins and notes? | 2M3a<br>Can I recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value? | Can I add and subtract amounts of **money** to give change, using both £ and p in practical contexts? |

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| | | | 2M3b<br>Can I find different combinations of coins that equal the same amounts of money? | |
| | | 1M4a<br>Can I tell the time to the hour and half past the hour and draw the hands on a clock face to show these times? | 2M4a<br>Can I 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? | Can I tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks? |
| | | | 2M4b<br>Can I compare and sequence intervals of time? | Can I compare durations of events, for example to calculate the time taken by particular events or tasks? |
| | | | 2M4C<br>Can I know the number of minutes in an hour and the number of hours in a day? | Can I estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight?<br><br>Can I know the number of seconds in a minute and the number of days in each month, year and leap year? |

# Mathematics Progression of Skills

| Properties of Shape | | | | |
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| | Can I talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'?<br>Can I select, rotate and manipulate shapes to develop spatial reasoning skills? | | | Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them |
| | Can I select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc?<br>Can I combine shapes to make new ones – an arch, a bigger triangle, etc?<br>Can I compose and decompose shapes so that I recognise that a shape can have other shapes within it, just as numbers can? | 1G1a<br>Can I recognise and name common 2-D shapes: e.g. rectangles (including squares), circles and triangles?<br>1G1b<br>Can I recognise and name common 3-D shapes e.g. cuboids (including cubes), pyramids and spheres? | 2G1a<br>2G1b<br>Can I compare and sort common 2-D and 3-D shapes and everyday objects? | Can I recognise angles as a property of shape or a description of a turn?<br><br>Can I identify right angles?<br><br>Can I recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn?<br>Can I identify whether angles are greater than or less than a right angle?<br><br>Can I identify horizontal and vertical lines and pairs of perpendicular and parallel lines? |
| | | | 2G2a<br>Can I identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line? | |
| | | | 2G2b | |

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| | | | Can I identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces? | |
| | | | 2G3<br>Can I identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]? | |
| **Position and Direction** | | | | |
| | Can I understand position through words alone – for example, "The bag is under the table," – with no pointing?<br>Can I describe a familiar route? Can I discuss routes and locations, using words like 'in front of' and 'behind'? | | 2P1<br>Can I order and arrange combinations of mathematical objects in patterns and sequences? | |
| | Can I talk about and identify the patterns around me? For example: stripes on clothes, designs on rugs and wallpaper.<br>Can I use informal language like 'pointy', 'spotty', 'blobs', etc?<br>Can I extend and create ABAB patterns – stick, leaf, stick, leaf?<br>Can I notice and correct an error in a repeating pattern?<br>Can I begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'?<br>Can I continue, copy and create repeating patterns? | 1P2<br>Can I describe position, direction and movement, including whole, half, quarter and three-quarter turns? | 2P2<br>Can I 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)? | |

# Mathematics Progression of Skills

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| | **Statistics** | | | |
| | | | 2S1<br>Can I interpret and construct simple pictograms, tally charts, block diagrams and tables? | Can I interpret and present data using bar charts, pictograms and tables? |
| | | | 2S2a<br>Can I ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity? | |
| | | | 2S2b<br>Can I ask and answer questions about totalling and comparing categorical data? | Can I solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables? |