



## Mathematics – Skills Progression

Area of Study	EYFS [30-50 months - Nursery]	EYFS [40-60 months] - Reception	KS1 Year 1	KS1 Year 2	Where they are going next
<b>Number and Place Value</b>	<p>Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.</p> <p>Counts an irregular arrangement of up to ten objects.</p> <p>Estimates how many objects they can see and checks by counting them.</p>	<p>recognise and count reliably with numbers 1-20 and place them in order</p> <p>count objects reliably</p> <p>say which number is one more or less than a given number</p> <p>records using marks that they can interpret and explain words.</p>	<p>count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</p> <p>count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens</p> <p>given a number, identify one more and one less</p> <p>identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</p> <p>read and write numbers from 1 to 20 in numerals and</p>	<p>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p> <p>recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>identify, represent and estimate numbers using different representations, including the number line</p> <p>compare and order numbers from 0 up to 100; use <math>&lt;</math>, <math>&gt;</math> and <math>=</math> signs</p> <p>read and write numbers to at least 100 in numerals and in words</p> <p>use place value and number facts to solve problems.</p>	<p>count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>compare and order numbers up to 1000</p> <p>identify, represent and estimate numbers using different representations</p> <p>read and write numbers up to 1000 in numerals and in words</p> <p>solve number problems and practical problems involving these ideas</p>
<b>Addition and subtraction</b>	<p>Says the number that is one more than a given number.</p>	<p>using quantities and objects children add and subtract two single digit numbers and count on or back to find the answer</p>	<p>read, write and interpret mathematical statements involving addition (+),</p>	<p>solve problems with addition and subtraction:</p> <p>-using concrete objects and pictorial representations, including those</p>	<p>add and subtract numbers mentally, including:</p> <p>-a three-digit number and ones</p>



	<p>Finds the total number of items in two groups by counting all of them</p>	<p>begin to use the vocabulary involved in addition and subtraction</p> <p>identifies own mathematical problems based on own interests and fascinations</p>	<p>subtraction (–) and equals (=) signs</p> <p>represent and use number bonds and related subtraction facts within 20</p> <p>add and subtract one-digit and two-digit numbers to 20, including zero</p> <p>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = \square - 9</math>.</p>	<p>involving numbers, quantities and measures</p> <p>-applying their increasing knowledge of mental and written methods</p> <p>recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p> <p>add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <p>-a two-digit number and ones</p> <p>-a two-digit number and tens</p> <p>-two two-digit numbers</p> <p>-adding three one-digit numbers</p> <p>show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p>-a three-digit number and tens</p> <p>-a three-digit number and hundreds</p> <p>add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> <p>estimate the answer to a calculation and use inverse operations to check answers</p> <p>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</p>
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<b>Multiplication and division</b>		<p>solve problems involving doubling halving and sharing</p>	<p>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</p>	<p>recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (<math>\times</math>), division (<math>\div</math>) and equals (=) signs</p> <p>show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</p>	<p>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>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</p> <p>solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects</p>
<b>Fractions</b>		<p>solve problems involving doubling halving and sharing</p>	<p>recognise, find and name a half as one of two equal parts of an object, shape or quantity</p>	<p>recognise, find, name and write fractions <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity</p>	<p>count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal</p>



			<p>recognise, find and name a quarter as one of four equal parts of an object, shape or quantity</p>	<p>write simple fractions e.g. <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of two quarters and one half.</p>	<p>parts and in dividing one-digit numbers or quantities by 10</p> <p>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>recognise and show, using diagrams, equivalent fractions with small denominators</p> <p>add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math> ]</p> <p>compare and order unit fractions with the same denominator</p> <p>solve problems that involve all of the above</p>
Measurement		<p>use everyday language to talk about size, weight, capacity, distance, time and money</p>	<p>compare, describe and solve practical problems for:</p> <p>-lengths and heights [for example, long/short,</p>	<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)</p>	<p>measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p>



		<p>compare objects and quantities and solve problems</p> <p>order two or three items by length, weight, height and capacity</p> <p>orders and sequences three events within a day</p>	<p>longer/shorter, tall/short, double/half]</p> <p>-mass/weight [for example, heavy/light, heavier than, lighter than]</p> <p>-capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]</p> <p>-time [for example, quicker, slower, earlier, later]</p> <p>measure and begin to record the following:</p> <p>-lengths and heights</p> <p>-mass/weight</p> <p>-capacity and volume</p> <p>-time (hours, minutes, seconds)</p> <p>recognise and know the value of different denominations of coins and notes</p> <p>sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow,</p>	<p>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 &gt;, &lt; 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 of the same unit, including giving change</p> <p>compare and sequence intervals of time</p> <p>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>	<p>measure the perimeter of simple 2-D shapes</p> <p>add and subtract amounts of money to give change, using both £ and p in practical contexts</p> <p>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</p> <p>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</p> <p>know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p>compare durations of events [for example to calculate the time taken by particular events or tasks]</p>
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			<p>morning, afternoon and evening]</p> <p>recognise and use language relating to dates, including days of the week, weeks, months and years</p> <p>tell the time to the hour and half past the hour and draw the hands on a clock face to show these times</p>		
Geometry- properties of shape		<p>recognise, create and describe patterns</p> <p>explore the characteristics of everyday objects and shapes 2-D/3-D and use mathematical language to describe them</p>	<p>recognise and name common 2-D and 3-D shapes, including:</p> <p>2-D shapes [for example, rectangles (including squares), circles and triangles]</p> <p>3-D shapes [for example, cuboids (including cubes), pyramids and spheres]</p>	<p>identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <p>identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</p> <p>identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</p> <p>compare and sort common 2-D and 3-D shapes and everyday objects</p>	<p>draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>recognise angles as a property of shape or a description of a turn</p> <p>identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle</p> <p>identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p>



<p><b>Geometry- position and direction</b></p>		<p>children use everyday language to talk about position and direction</p>	<p>describe position, direction and movement, including whole, half, quarter and three-quarter turns</p>	<p>order and arrange combinations of mathematical objects in patterns and sequences</p> <p>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)</p>	
<p><b>Statistics and Probability</b></p>				<p>interpret and construct simple pictograms, tally charts, block diagrams and simple tables</p> <p>ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</p> <p>ask and answer questions about totalling and comparing categorical data</p>	<p>interpret and present data using bar charts, pictograms and tables</p> <p>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.</p>