



## Progression of Knowledge and Skills in Maths

<b>Number – Place Value</b>			
<b>Little Apples</b>	<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
<ul style="list-style-type: none"> <li>• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising').</li> <li>• Recite numbers past 5.</li> <li>• Say one number for each item in order: 1,2,3,4,5.</li> <li>• Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle').</li> <li>• Show 'finger numbers' up to 5.</li> <li>• Link numerals and amounts: for example, showing the right number</li> </ul>	<ul style="list-style-type: none"> <li>• Count objects, actions and sounds.</li> <li>• Subitise.</li> <li>• Link the number symbol (numeral) with its cardinal number value.</li> <li>• Count beyond ten.</li> <li>• Compare numbers.</li> <li>• Understand the 'one more than/one less than' relationship between consecutive numbers.</li> <li>• Explore the composition of numbers to 10.</li> </ul>	<ul style="list-style-type: none"> <li>• Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</li> <li>• Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens</li> <li>• Given a number, identify one more and one less</li> <li>• Identify and represent numbers using objects and pictorial representations including the number line, and use the language of:</li> </ul>	<ul style="list-style-type: none"> <li>• Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</li> <li>• Recognise the place value of each digit in a two-digit number (tens, ones)</li> <li>• Identify, represent and estimate numbers using different representations, including the number line</li> <li>• Compare and order numbers from 0 up to 100; use and = signs</li> <li>• Read and write numbers to at least 100 in numerals and in words</li> <li>• Use place value and number facts to solve problems.</li> </ul>

<p>of objects to match the numeral, up to 5.</p> <ul style="list-style-type: none"> <li>• Experiment with their own symbols and marks as well as numerals.</li> <li>• Compare quantities using language: 'more than', 'fewer than'.</li> </ul>	<ul style="list-style-type: none"> <li>• Automatically recall number bonds for numbers 0-5 and some to 10.</li> </ul>	<p>equal to, more than, less than (fewer), most, least</p> <ul style="list-style-type: none"> <li>• Read and write numbers from 1 to 20 in numerals and words</li> </ul>	
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<b>Number – Addition and Subtraction</b>			
<b>Little Apples Nursery</b>	<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
<ul style="list-style-type: none"> <li>• Solve real world mathematical problems with numbers up to 5.</li> </ul>		<ul style="list-style-type: none"> <li>• Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs</li> <li>• Represent and use number bonds and related subtraction facts within 20</li> <li>• Add and subtract one-digit and two-digit numbers to 20, including zero</li> <li>• Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = ( ) - 9</math></li> </ul>	<ul style="list-style-type: none"> <li>• Solve problems with addition and subtraction: <ul style="list-style-type: none"> <li>○ using concrete objects and pictorial representations, including those involving numbers, quantities and measures;</li> <li>○ applying their increasing knowledge of mental and written methods</li> </ul> </li> <li>• Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</li> <li>• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>○ a two-digit number and ones</li> <li>○ a two-digit number and tens</li> <li>○ two two-digit numbers</li> <li>○ adding three one-digit numbers</li> </ul> </li> </ul>

			<ul style="list-style-type: none"> <li>• Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</li> <li>• Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems</li> </ul>
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<b>Number – Multiplication and Division</b>			
<b>Little Apples Nursery</b>	<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
		<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> <li>• 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</li> <li>• Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</li> <li>• Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods,</li> </ul>

			and multiplication and division facts, including problems in contexts.
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<b>Number – Fractions</b>			
<b>Little Apples Nursery</b>	<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
		<ul style="list-style-type: none"> <li>Recognise, find and name a half as one of two equal parts of an object, shape or quantity</li> <li>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity</li> </ul>	<ul style="list-style-type: none"> <li>Recognise, find, name and write fractions <math>\frac{1}{3}</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</li> <li>Write simple fractions for example, <math>\frac{1}{2}</math> of <math>6 = 3</math> and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math></li> </ul>

<b>Measurement</b>			
<b>Little Apples Nursery</b>	<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
<ul style="list-style-type: none"> <li>Make comparisons between objects relating to size, length, weight and capacity.</li> </ul>	<ul style="list-style-type: none"> <li>Compare length, weight and capacity.</li> </ul>	<ul style="list-style-type: none"> <li>Compare, describe and solve practical problems for: <ul style="list-style-type: none"> <li>lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]</li> <li>mass/weight [for example, heavy/light, heavier than, lighter than]</li> <li>capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]</li> <li>time [for example, quicker, slower, earlier, later]</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>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</li> <li>Compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> <li>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</li> </ul>

		<ul style="list-style-type: none"> <li>• Measure and begin to record the following: <ul style="list-style-type: none"> <li>○ lengths and heights;</li> <li>○ mass/weight;</li> <li>○ capacity and volume;</li> <li>○ time (hours, minutes, seconds)</li> </ul> </li> <li>• Recognise and know the value of different denominations of coins and notes</li> <li>• Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]</li> <li>• Recognise and use language relating to dates, including days of the week, weeks, months and years</li> <li>• Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times</li> </ul>	<ul style="list-style-type: none"> <li>• Find different combinations of coins that equal the same amounts of money</li> <li>• Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</li> <li>• Compare and sequence intervals of time</li> <li>• 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</li> <li>• Know the number of minutes in an hour and the number of hours in a day</li> </ul>
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<b>Geometry - Properties of Shapes</b>			
<b>Little Apples Nursery</b>	<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
<ul style="list-style-type: none"> <li>• 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'.</li> <li>• Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.</li> <li>• Continue, copy and create repeating patterns.</li> </ul>	<ul style="list-style-type: none"> <li>• Recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> <li>○ 2-D shapes [for example, rectangles (including squares), circles and triangles]</li> <li>○ 3-D shapes [for example, cuboids (including cubes),</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</li> <li>• Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> <li>• Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]</li> </ul>

<ul style="list-style-type: none"> <li>• Combine shapes to make new ones – an arch, a bigger triangle etc.</li> <li>• Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’ etc.</li> <li>• Extend and create ABAB patterns – stick, leaf, stick, leaf</li> <li>• Notice and correct an error in a repeating pattern.</li> <li>• Begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then...’</li> </ul>		<p>pyramids and spheres].</p>	<ul style="list-style-type: none"> <li>• Compare and sort common 2-D and 3-D shapes and everyday objects</li> </ul>
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<b>Geometry - Position and Direction</b>			
<b>Little Apples</b>	<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
<ul style="list-style-type: none"> <li>• Understand position through words alone – for example, “The bag is under the table,” – with no pointing.</li> <li>• Describe a familiar route.</li> <li>• Discuss routes and locations, using words like ‘in front of’ and ‘behind’.</li> </ul>	<ul style="list-style-type: none"> <li>• Select, rotate and manipulate shapes to develop spatial reasoning skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe position, direction and movement, including whole, half, quarter and threequarter turns.</li> </ul>	<ul style="list-style-type: none"> <li>• Order and arrange combinations of mathematical objects in patterns and sequences</li> <li>• 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-</li> </ul>

			quarter turns (clockwise and anti-clockwise).
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<b>Statistics</b>			
<b>Little Apples Nursery</b>	<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
			<ul style="list-style-type: none"> <li>• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</li> <li>• Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>• Ask and answer questions about totalling and comparing categorical data</li> </ul>