

## Tower Hill Primary School Mathematics Progression Framework – Year 2

Y2	Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Measurement	Geometry		Statistics
						Properties of Shape	Position and Direction	
Problem Solving	Use place value and number facts to solve problems	Solve problems with addition and subtraction	Solve problems involving multiplication and division, using materials, arrays, repeated addition and mental methods		solve simple problems in a practical context involving addition and subtraction of money of the same unit			
Year 2, Phase 1 – Sept – Nov	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*Count in steps of 2 from 0 and in tens from any number, forward or 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 200, use &lt; &gt; and = signs</li> <li>*read and write numbers to at least 100 in numerals</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*use concrete objects and pictorial representations, including those involving numbers.</li> <li>*apply their knowledge of mental and written methods.</li> <li>*recall and use addition and subtraction facts to 20 fluently.</li> <li>*add and subtract numbers using concrete objects, pictorial representations and mentally including a two digit number and ones and a two digit number and tens.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*recall and use multiplication and division facts for the 2 and 10 multiplication tables, including recognising odd and even numbers.</li> <li>*show that multiplication of two numbers can be done in any order (commutative)</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*Recognise, find, name and write fractions <math>\frac{1}{3}</math> and <math>\frac{1}{4}</math></li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*Compare and order lengths, record the results using &gt; &lt; and =</li> <li>*find different combinations of coins that equal the same amounts of money</li> <li>*compare and sequence intervals of time</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line</li> <li>*identify the 2D shapes on the surface of 3D shapes, for example a circle on a cylinder and a triangle on a pyramid</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*order and arrange combinations of mathematical objects in patterns and sequences</li> </ul>	<p>Pupils should be taught to:</p>

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Problem Solving	Use place value and number facts to solve problems	Solve problems with addition and subtraction	Solve problems involving multiplication and division, using materials, arrays, repeated addition and mental methods		solve simple problems in a practical context involving addition and subtraction of money of the same unit including giving change			
Year 2, Phase 2 – Nov – Feb	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*Count in steps of 2 and 5 from 0 and in tens from any number, forward or 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 200, use &lt; &gt; and = signs</li> <li>*read and write numbers to at least 100 in numerals</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*use concrete objects and pictorial representations, including those involving numbers and measures.</li> <li>*apply their knowledge of mental and written methods.</li> <li>*recall and use addition and subtraction facts to 20 fluently.</li> <li>*add and subtract numbers using concrete objects, pictorial representations and mentally including a two digit number and ones and a two digit number and tens.</li> <li>*add and subtract numbers using concrete objects, pictorial representations and mentally including adding three one digit add.</li> <li>*show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.</li> </ul>	<p>Pupils should be taught to:</p> <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 using the multiplication and equals signs.</li> <li>*show that multiplication of two numbers can be done in any order (commutative)</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*Recognise, find, name and write fractions <math>\frac{1}{3}</math> and <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> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) using rulers.</li> <li>*Compare and order lengths, record the results using &gt; &lt; and =</li> <li>*recognise and use symbols for pounds and pence; combine amounts to make a particular value.</li> <li>*find different combinations of coins that equal the same amounts of money</li> <li>*compare and sequence intervals of time</li> <li>*tell and write time 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>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line</li> <li>*identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.</li> <li>*identify the 2D shapes on the surface of 3D shapes, for example a circle on a cylinder and a triangle on a pyramid</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*order and arrange combinations of mathematical objects in patterns.</li> <li>*use mathematical vocabulary to describe position, direction and movement, including movement in a straight line</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.</li> </ul>

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						Properties of Shape	Position and Direction	
Problem Solving	Use place value and number facts to solve problems	Solve problems with addition and subtraction	Solve problems involving multiplication and division, using materials, arrays, repeated addition and mental methods and multiplication and division facts, including problems in contexts.		solve simple problems in a practical context involving addition and subtraction of money of the same unit including giving change			
Year 2, Phase 3 – Feb – Apr	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward or 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 200, use &lt; &gt; and = signs</li> <li>*read and write numbers to at least 100 in numerals and in words</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*use concrete objects and pictorial representations, including those involving numbers and measures.</li> <li>*apply their increasing knowledge of mental and written methods.</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 a two digit number and ones and a two digit number and tens.</li> <li>*add and subtract numbers using concrete objects, pictorial representations and mentally including adding three one digit add.</li> <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 missing number problems.</li> </ul>	<p>Pupils should be taught to:</p> <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, division 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> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*Recognise, find, name and write fractions <math>\frac{1}{3}</math> and <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 eg: <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math>.</li> </ul>	<p>Pupils should be taught to:</p> <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, capacity 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; combine amounts to make a particular value.</li> <li>*find different combinations of coins that equal the same amounts of money</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>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line</li> <li>*identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.</li> <li>*identify the 2D shapes on the surface of 3D shapes, for example a circle on a cylinder and a triangle on a pyramid</li> <li>*compare and sort common 2D and 3D shapes and everyday objects</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*order and arrange combinations of mathematical objects in patterns.</li> <li>*use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguish between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anti-clockwise)</li> </ul>	<p>Pupils should be taught to:</p> <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>