

# Tower Hill Primary School Mathematics Progression Framework – Year 3

Y3	Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions	Measurement	Geometry	Statistics
						Properties of Shape	
Problem Solving	Solve number problems and practical problems involving these ideas	Solve problems including missing number problems, using number facts, place value and more complex addition and subtraction.	Solve problems including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects.	solve problems that involve all of the below			solve one step and two step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables.
Year 3, Phase 1 – Sept – Nov	Pupils should be taught to: *count from 0 in multiples of 4 *find 10 more or less than a given number *recognise the place value of each digit in a three-digit number (hundreds, tens and ones) *identify, represent and estimate numbers using different representations	Pupils should be taught to: *add and subtract numbers mentally, including: a three digit number and ones a three digit number and hundreds *estimate the answer to a calculation and use inverse operations to check answers	Pupils should be taught to: *recall and use multiplication and division facts for the 3 and 4 multiplication tables *write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, using mental and progressing to formal written methods.	Pupils should be taught to: *count up and down in tenths, recognise that tenths arise from dividing an object into 10 equal parts *recognise, find and write fractions of a discrete set of objects, unit fractions *compare and order fractions with the same denominators	Pupils should be taught to: *measure, compare, lengths (m/cm/mm) mass (kg/g) volume/capacity (l/ml) *measure the perimeter of simple 2D shapes *add and subtract amounts of money *tell and write the time from an analogue clock and 12 hour clocks *use vocabulary such as am, pm, morning, afternoon, noon and midnight	Pupils should be taught to: *draw 2D shapes and make 3D shapes using modelling materials *identify right angles, *identify horizontal and vertical lines	Pupils should be taught to: *interpret and present data using bar charts, pictograms and tables

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Year 3, Phase 2 – Nov – Feb	Pupils should be taught to: *count from 0 in multiples of 4, 50 and 100 *find 10 more or less than a given number *recognise the place value of each digit in a three-digit number (hundreds, tens and ones) *compare and order numbers up to 1000 *identify, represent and estimate numbers using different representations *read and write numbers up to 1000 in numerals and in words	Pupils should be taught to: *add and subtract numbers mentally, including: a three digit number and ones a three digit number and tens a three digit number and hundreds *add and subtract numbers with up to three digits using formal written methods of column addition and subtraction *estimate the answer to a calculation and use inverse operations to check answers	Pupils should be taught to: *recall and use multiplication and division facts for the 3 and 4 multiplication tables *write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, using mental and progressing to formal written methods.	Pupils should be taught to: *count up and down in tenths, recognise that tenths arise from dividing an object into 10 equal parts *recognise, find and write fractions of a discrete set of objects, unit fractions *recognise and use fractions as numbers unit fractions *recognise and show using diagrams, equivalent fractions with small denominators *compare and order unit fractions, fractions with the same denominators	Pupils should be taught to: *measure, compare, add and subtract lengths (m/cm/mm) mass (kg/g) volume/capacity (l/ml) *measure the perimeter of simple 2D shapes *add and subtract amounts of money to give change, using both £ and p in practical contexts *tell and write the time from an analogue clock 12 hour clocks *use vocabulary such as am, pm, morning, afternoon, noon and midnight *know the number of seconds in a minute, year and leap year	Pupils should be taught to: *draw 2D shapes and make 3D shapes using modelling materials *recognise angles as a property of shape *identify right angles, recognise that two right angles make a half turn, *identify horizontal and vertical lines	Pupils should be taught to: *interpret and present data using bar charts, pictograms and tables

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Year 3, Phase 3 – Feb – Apr	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*count from 0 in multiples of 4, 8, 50 and 100</li> <li>*find 10 more or less than a given number</li> <li>*recognise the place value of each digit in a three-digit number (hundreds, tens and ones)</li> <li>*compare and order numbers up to 1000</li> <li>*identify, represent and estimate numbers using different representations</li> <li>*read and write numbers up to 1000 in numerals and in words</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*add and subtract numbers mentally, including:               <ul style="list-style-type: none"> <li>a three digit number and ones</li> <li>a three digit number and tens</li> <li>a three digit number and hundreds</li> </ul> </li> <li>*add and subtract numbers with up to three digits using formal written methods of column addition and subtraction</li> <li>*estimate the answer to a calculation and use inverse operations to check answers</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 3, 4 and 8 multiplication tables</li> <li>*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.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*count up and down in tenths, recognise that tenths arise from dividing an object into 10 equal parts and in dividing one digit numbers or quantities by 10</li> <li>*recognise, find and write fractions of a discrete set of objects, unit fractions and non-unit fractions with small denominators</li> <li>*recognise and use fractions as numbers unit fractions and non-unit fractions with small denominators</li> <li>*recognise and show using diagrams, equivalent fractions with small denominators</li> <li>*add and subtract fractions with the same denominator within one whole eg: <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math></li> <li>*compare and order unit fractions, fractions with the same denominators</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*measure, compare, add and subtract lengths (m/cm/mm) mass (kg/g) volume/capacity (l/ml)</li> <li>*measure the perimeter of simple 2D shapes</li> <li>*add and subtract amounts of money to give change, using both £ and p in practical contexts</li> <li>*tell and write the time from an analogue clock including using Roman numerals from I to XII and 12 hour clocks</li> <li>*estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock</li> <li>*use vocabulary such as am, pm, morning, afternoon, noon and midnight</li> <li>*know the number of seconds in a minute and the number of days in each month, year and leap year</li> <li>*compare durations of events, for example to calculate the time taken by particular events or tasks.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*draw 2D shapes and make 3D shapes using modelling materials</li> <li>*recognise 3D shapes in different orientations and describe them</li> <li>*recognise angles as a property of shape or a description of a turn</li> <li>*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</li> <li>*identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>*interpret and present data using bar charts, pictograms and tables</li> </ul>