



## Mathematics Long Term Plan

Robin 2023-2024

### Autumn

	National Curriculum Objectives	Small Steps
<b>Number: Place Value</b>  <b>3 weeks</b>	<ul style="list-style-type: none"> <li>Identify, represent and estimate numbers using different representations.</li> <li>Find 10 or 100 more or less than a given number</li> <li>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).</li> <li>Compare and order numbers up to 1000</li> <li>Read and write numbers up to 1000 in numerals and in words.</li> <li>Solve number problems and practical problems involving these ideas.</li> <li>Count from 0 in multiples of 4, 8, 50 and 100</li> </ul>	<ul style="list-style-type: none"> <li>Represent numbers to 100</li> <li>Partition numbers to 100</li> <li>Number line to 100</li> <li>Hundreds</li> <li>Represent numbers to 1,000</li> <li>Partition numbers to 1,000</li> <li>Flexible partitioning of numbers to 1,000</li> <li>Hundreds, tens and ones</li> <li>Find 1, 10 or 100 more or less</li> <li>Number line to 1,000</li> <li>Estimate on a number line to 1,000</li> <li>Compare numbers to 1,000</li> <li>Order numbers to 1,000</li> <li>Count in 50s</li> </ul>
<b>Number: Addition and Subtraction</b>  <b>5 weeks</b>	<ul style="list-style-type: none"> <li>Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three digit number and hundreds.</li> <li>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.</li> <li>Estimate the answer to a calculation and use inverse operations to check answers.</li> <li>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</li> </ul>	<ul style="list-style-type: none"> <li>Apply number bonds within 10</li> <li>Add and subtract 1s</li> <li>Add and subtract 10s</li> <li>Add and subtract 100s</li> <li>Spot the pattern</li> <li>Add 1s across a 10</li> <li>Add 10s across a 100</li> <li>Subtract 1s across a 10</li> <li>Subtract 10s across a 100</li> <li>Make connections</li> <li>Add two numbers (no exchange)</li> <li>Subtract two numbers (no exchange)</li> <li>Add two numbers (across a 10)</li> <li>Add two numbers (across a 100)</li> <li>Subtract two numbers (across a 10)</li> <li>Subtract two numbers (across a 100)</li> <li>Add 2-digit and 3-digit numbers</li> <li>Subtract a 2-digit number from a 3-digit number</li> </ul>

		<ul style="list-style-type: none"> <li>• Complements to 100</li> <li>• Estimate answers</li> <li>• Inverse operations</li> <li>• Make decisions</li> </ul>
<b>Multiplication and Division A</b>  <b>4 weeks</b>	<ul style="list-style-type: none"> <li>• Count from 0 in multiples of 4, 8, 50 and 100</li> <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 they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</li> <li>• 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 objectives.</li> </ul>	<ul style="list-style-type: none"> <li>• Multiplication – equal groups</li> <li>• Use arrays</li> <li>• Multiples of 2</li> <li>• Multiples of 5 and 10</li> <li>• Sharing and grouping</li> <li>• Multiply by 3</li> <li>• Divide by 3</li> <li>• The 3 times-table</li> <li>• Multiply by 4</li> <li>• Divide by 4</li> <li>• The 4 times-table</li> <li>• Multiply by 8</li> <li>• Divide by 8</li> <li>• The 8 times-table</li> <li>• The 2, 4 and 8 times-tables</li> </ul>

## Spring

	National Curriculum Objectives	Small Steps
<b>Multiplication and Division B</b>  <b>3 weeks</b>	<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 they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.</li> <li>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> objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Multiples of 10</li> <li>Related calculations</li> <li>Reasoning about multiplication</li> <li>Multiply a 2-digit number by a 1-digit number – no exchange</li> <li>Multiply a 2-digit number by a 1-digit number – with exchange</li> <li>Link multiplication and division</li> <li>Divide a 2-digit number by a 1-digit number – no exchange</li> <li>Divide a 2-digit number by a 1-digit number – flexible partitioning</li> <li>Divide a 2-digit number by a 1-digit number – with remainders</li> <li>Scaling</li> <li>How many ways?</li> </ul>
<b>Measurement: Length and Perimeter</b>  <b>3 weeks</b>	<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> </ul>	<ul style="list-style-type: none"> <li>Measure in metres and centimetres</li> <li>Measure in millimetres</li> <li>Equivalent in centimetres and millimetres</li> <li>Metres, centimetres and millimetres</li> <li>Equivalent lengths (metres and centimetres)</li> <li>Equivalent lengths (centimetres and millimetres)</li> <li>Compare lengths</li> <li>Add lengths</li> <li>Subtract lengths</li> <li>What is perimeter?</li> <li>Measure perimeter</li> <li>Calculate perimeter</li> </ul>
<b>Number: Fractions A</b>  <b>3 weeks</b>	<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 and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</li> <li>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</li> <li>Solve problems that involve all</li> </ul>	<ul style="list-style-type: none"> <li>Understand the denominators of unit fractions</li> <li>Compare and order unit fractions</li> <li>Understand the numerators of unit fractions</li> <li>Understand the whole</li> <li>Compare and order non-unit fractions</li> <li>Fractions and scales</li> <li>Fractions on a number line</li> <li>Count in fractions on a number line</li> <li>Equivalent fractions on a number line</li> </ul>

	of the above.	<ul style="list-style-type: none"> <li>• Equivalent fractions as bar models</li> </ul>
<b>Measurement: Mass, Capacity and Temperature</b>  <b>3 weeks</b>	<ul style="list-style-type: none"> <li>• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).</li> </ul>	<ul style="list-style-type: none"> <li>• Use scales</li> <li>• Measure mass in grams</li> <li>• Measure mass in kilograms and grams</li> <li>• Equivalent masses (kilograms and grams)</li> <li>• Compare mass</li> <li>• Add and subtract mass</li> <li>• Measure capacity and volume in millilitres</li> <li>• Measure capacity and volume in litres and millilitres</li> <li>• Equivalent capacities and volumes (litres and millilitres)</li> <li>• Compare capacity and volume</li> <li>• Add and subtract capacity and volume</li> </ul>

## Summer

	National Curriculum Objectives	Small Steps
<b>Number: Fractions B</b>  <b>2 weeks</b>	<ul style="list-style-type: none"> <li>Recognise and show, using diagrams, equivalent fractions with small denominators.</li> <li>Compare and order unit fractions, and fractions with the same denominators.</li> <li>Add and subtract fractions with the same denominator within one whole [for example, <math>57 + 17 = 67</math>]</li> <li>Solve problems that involve all of the above.</li> </ul>	<ul style="list-style-type: none"> <li>Add fractions</li> <li>Subtract fractions</li> <li>Partition the whole</li> <li>Unit fractions of a set of objects</li> <li>Non-unit fractions of a set of objects</li> <li>Reasoning with fractions of an amount</li> </ul>
<b>Measurement: Money</b>  <b>2 weeks</b>	<ul style="list-style-type: none"> <li>Add and subtract amounts of money to give change, using both £ and p in practical contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Pounds and pence</li> <li>Convert pounds and pence</li> <li>Add money</li> <li>Subtract money</li> <li>Find change</li> </ul>
<b>Measurement: Time</b>  <b>3 weeks</b>	<ul style="list-style-type: none"> <li>Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks.</li> <li>Estimate and read time with increasing accuracy to the nearest minute.</li> <li>Record and compare time in terms of seconds, minutes and hours.</li> <li>Use vocabulary such as o'clock, a.m./p.m., 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>	<ul style="list-style-type: none"> <li>Roman numerals to 12</li> <li>Tell the time to 5 minutes</li> <li>Tell the time to the minute</li> <li>Read time on a digital clock</li> <li>Use a.m. and p.m.</li> <li>Years, months and days</li> <li>Days and hours</li> <li>Hours and minutes – use start and end times</li> <li>Hours and minutes – use durations</li> <li>Minutes and seconds</li> <li>Units of time</li> <li>Solve problems with time</li> </ul>
<b>Geometry: Shape</b>  <b>2 weeks</b>	<ul style="list-style-type: none"> <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> <li>Draw 2-D shapes and make 3-D</li> </ul>	<ul style="list-style-type: none"> <li>Turns and angles</li> <li>Right angles</li> <li>Compare angles</li> <li>Measure and draw accurately</li> <li>Horizontal and vertical</li> <li>Parallel and perpendicular</li> <li>Recognise and describe 2-D shapes</li> <li>Draw polygons</li> <li>Recognise and describe 3-D shapes</li> <li>Make 3-D shapes</li> </ul>

	<p>shapes using modelling materials.</p> <ul style="list-style-type: none"> <li>• Recognise 3-D shapes in different orientations and describe them.</li> </ul>	
<p><b>Statistics</b></p> <p><b>2 weeks</b></p>	<ul style="list-style-type: none"> <li>• Interpret and present data using bar charts, pictograms and tables.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret pictograms</li> <li>• Draw pictograms</li> <li>• Interpret bar charts</li> <li>• Draw bar charts</li> <li>• Collect and represent data</li> <li>• Two-way tables</li> </ul>
<p><b>Consolidation</b></p> <p><b>1 week</b></p>		