



# Spring Vale Primary School – Mathematics Medium Term Plan

## Year 3 – Autumn Term

Unit:	National Curriculum:	Small Steps:
<b>Number: Place Value</b>	<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; 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>• identify, represent and estimate numbers using different representations</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></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 1000</li><li>• Flexible partitioning of numbers to 1000</li><li>• Hundreds, tens and ones</li><li>• Find 1, 10 or 100 more or less</li><li>• Number line to 1000</li><li>• Estimate on a number line to 1000</li><li>• Compare numbers to 1000</li><li>• Order numbers to 1000</li><li>• Count in 50s</li></ul>
<b>Number: Addition and Subtraction</b>	<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 columnar addition and subtraction</li><li>• estimate the answer to a calculation and use inverse operations to check answers</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></ul>

	<ul style="list-style-type: none"> <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>• 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> <li>• Complements to 100</li> <li>• Estimate answers</li> <li>• Inverse operations</li> <li>• Make decisions</li> </ul>
<p><b>Number: Multiplication and Division</b></p>	<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> <li>• 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.</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 Vale Primary School – Mathematics Medium Term Plan

## Year 3 – Spring Term

Unit:	National Curriculum:	Small Steps:
<b>Number: Multiplication and Division</b>	<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><li>solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects.</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>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"><li>measure, compare, add and subtract: lengths (m/cm/mm)</li><li>measure the perimeter of simple 2-D shapes</li></ul>	<ul style="list-style-type: none"><li>Measure in metres and centimetres</li><li>Measure in millimetres</li><li>Measure 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></ul>

		<ul style="list-style-type: none"> <li>• Calculate perimeter</li> </ul>
<p><b>Number: Fractions</b></p>	<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 (e.g. <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>)</li> <li>• compare and order unit fractions, and fractions with the same denominators</li> <li>• solve problems that involve all of the above.</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 non-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> <li>• Equivalent fractions as bar models</li> </ul>
<p><b>Measurement: Mass and Capacity</b></p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• measure, compare, add and subtract: 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>



# Spring Vale Primary School – Mathematics Medium Term Plan

## Year 3 – Summer Term

Unit:	National Curriculum:	Small Steps:
<b>Number: Fractions</b>	<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 (e.g. <math>5/7 + 1/7 = 6/7</math>)</li><li>• compare and order unit fractions, and fractions with the same denominators</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>	<p>Pupils should be taught to:</p> <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>

**Measurement: Time**

- Pupils should be taught to:
- tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
  - estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight
  - know the number of seconds in a minute and the number of days in each month, year and leap year
  - compare durations of events, for example to calculate the time taken by particular events or tasks.

- Roman numerals to 12
- Tell the time to 5 minutes
- Tell the time to the minute
- Read time on a digital clock
- Use a.m. and p.m.
- Years, months and days
- Days and hours
- Hours and minutes – use start and end times
- Hours and minutes – use durations
- Minutes and seconds
- Units of time
- Solve problems with time

**Geometry: Properties of Shape**

- Pupils should be taught to:
- draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
  - recognise that angles are a property of shape or a description of a turn
  - 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
  - identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

- Turks and angles
- Right angles
- Compare angles
- Measure and draw accurately
- Horizontal and vertical
- Parallel and perpendicular
- Recognise and describe 2-D shapes
- Draw polygons
- Recognise and describe 3-D shapes
- Make 3-D shapes

**Statistics**

- Pupils should be taught to:
- interpret and present data using bar charts, pictograms and tables
  - 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.

- Interpret pictograms
- Draw pictograms
- Interpret bar charts
- Draw bar charts
- Collect and represent data
- Two-way tables