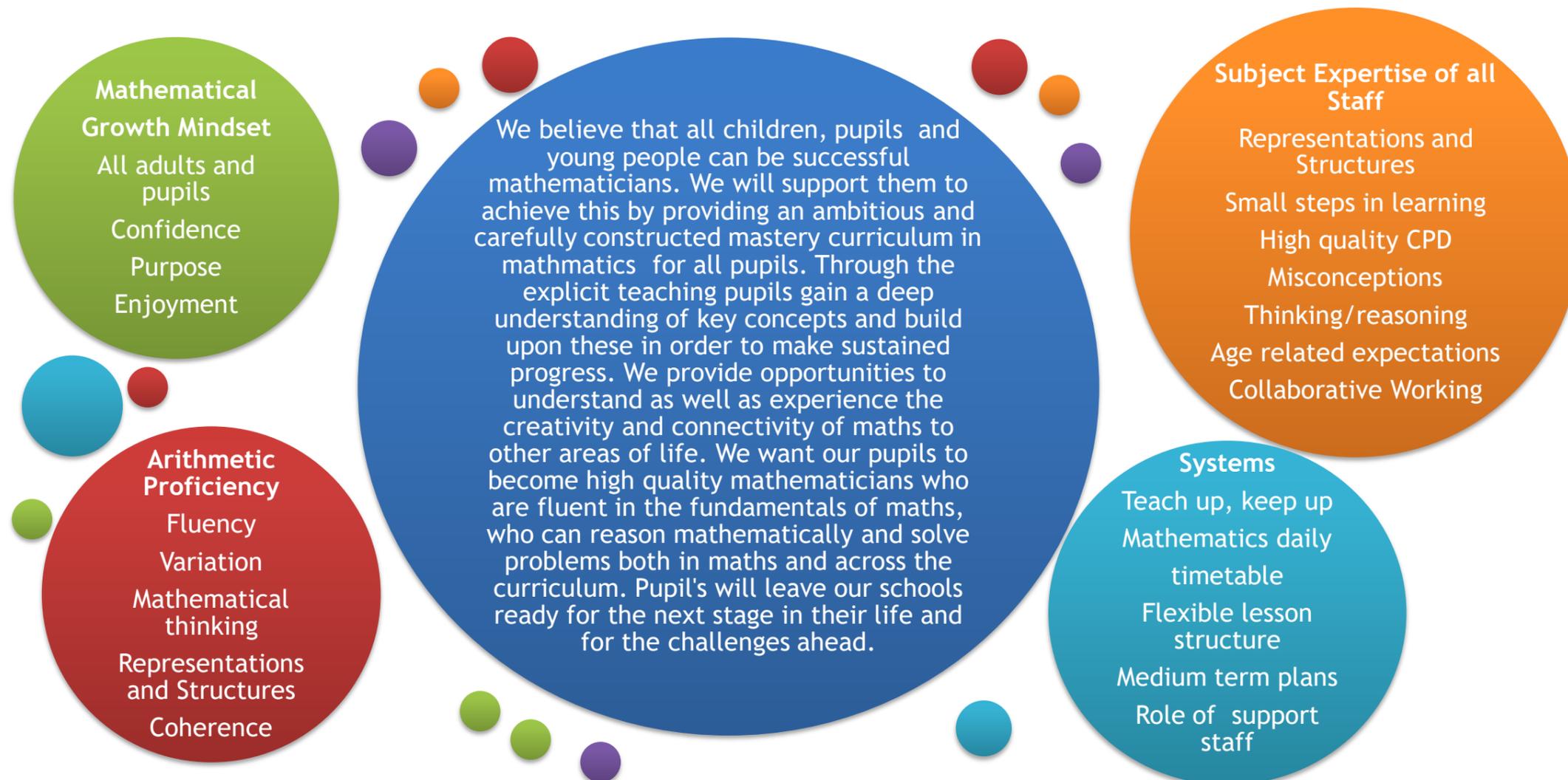




# Maths Plans



## Maths Intent





# Maths Plans

## Mixed Age Medium Term Plans

**Maths Medium Term Plan Year 1 and Year 2**

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	<b>Number and Place Value – Year 1 to 20 Year 2 to 100</b> ♣ count to and across 20 forwards and backwards, beginning with 0 or 1, or from any given number ♣ count, read and write numbers to 20 in numerals and words ♣ given a number, identify 1 more and 1 less ♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least ♣ count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward ♣ recognise the place value of each digit in a two-digit number (tens, ones) ♣ identify, represent and estimate numbers using different representations, including the number line ♣ compare and order numbers from 0 up to 100; use <, > and = signs ♣ read and write numbers to at least 100 in numerals and in words ♣ use place value and number facts to solve problems. Year 1: read and write numbers to at least 100 in numerals and words			<b>Addition and subtraction – Year 1 to 20 (inc money) Year 2 within 100 (inc money)</b> ♣ read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ♣ represent and use number bonds and related subtraction facts within 20 ♣ add and subtract one-digit and two-digit numbers to 20, including 0 ♣ solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$ ♣ recognise and know the value of different denominations of coins and notes ♣ solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures ♣ applying their increasing knowledge of mental and written methods ♣ recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 ♣ 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> ♣ show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot ♣ recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. ♣ recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value ♣ find different combinations of coins that equal the same amounts of money ♣ solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change						<b>Number: and– Year 1 Place Value to 50 and multiplication Year 2: Multiplication</b> ♣ count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number ♣ count, read and write numbers to 50 in numerals and words; ♣ count in multiples of 2s, 5s and 10s ♣ recognise and know the value of different denominations of coins and notes ♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least ♣ solve one step problems involving multiplication and division, by calculation the answer using concrete objects, pictorial representations and arrays with the support of the teacher  ♣ count in steps of 2, 3, 5 and 3 from 0, and in tens from any number, forward and backward ♣ calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs ♣ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot ♣ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. ♣ Recall and use multiplication and division facts for 2,5, and 10 times tables, including recognising odd and even numbers		

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Spring	<p>Number: Year 1 Division and Consolidation Year 2: Division</p> <ul style="list-style-type: none"> <li>♣ Count in multiples of 2, 5 and 10</li> <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 = ? – 9</li> <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, and multiplication and division facts, including problems in contexts.</li> </ul>	<p>Year 1 Place Value to 100</p> <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 2s, 5s and 10s</li> <li>♣ given a number, identify 1 more and 1 less</li> <li>♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</li> </ul>	<p>Year 1 Place Value to 100</p> <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 2s, 5s and 10s</li> <li>♣ given a number, identify 1 more and 1 less</li> <li>♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</li> </ul>	<p>Year 2 Statistics</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>	<p>Measurement – Length and Height</p> <ul style="list-style-type: none"> <li>♣ Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]</li> <li>♣ measure and begin to record the following: Length and height</li> <li>♣ choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); using rulers, scales, ♣ compare and order lengths and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math></li> </ul>	<p>Shape</p> <ul style="list-style-type: none"> <li>♣ recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles]</li> <li>♣ recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]</li> <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> <li>♣ compare and sort common 2-D and 3-D shapes and everyday objects</li> </ul>			<p>Number: Year 1 Fractions and Consolidation Year 2: Fractions</p> <ul style="list-style-type: none"> <li>♣ recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity</li> <li>♣ recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity</li> <li>♣ Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]</li> <li>♣ Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than]</li> <li>♣ recognise, find, name and write fractions <math>\frac{1}{2}</math>, <math>\frac{1}{3}</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 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math>.</li> </ul>			Consolidation

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<b>Summer</b>	Position and direction ♣ describe position, direction and movement, including whole, half, quarter and three-quarter turns  ♣ <i>order and arrange combinations of mathematical objects in patterns and sequences</i> ♣ <i>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-quarter turns (clockwise and anticlockwise).</i>	Time ♣ Measure and begin to record time [for example, quicker, slower, earlier, later] time (hours, minutes, seconds)  ♣ sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]  ♣ recognise and use language relating to dates, including days of the week, weeks, months and years  ♣ tell the time to the hour and half past the hour and draw the hands on a clock face to show these times  ♣ <i>compare and sequence intervals of time</i> ♣ <i>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</i> ♣ <i>know the number of minutes in an hour and the number of hours in a day</i>		Year 1: Place Value recap  Year 2: Problem Solving  Year one: consolidate their learning on place value  <i>Year two: teacher assessment gaps in understanding</i>		Measurement ♣ Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than]  ♣ capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]  ♣ measure and begin to record the following: mass/weight capacity and volume  <b>Year 2: Measurement: Mass. Capacity and temperature</b> ♣ <i>Choose and use appropriate standard units to estimate and measure (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using thermometers and measuring vessels</i> ♣ <i>compare and order, mass, volume/capacity and record the results using &gt;, &lt; and =</i>			Year 1: Four Operations recap  <i>Year 2: Consolidation and Investigations</i>			

Maths Year 1 and 2: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL

**Maths Medium Term Plan Year 2 and Year 3**

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<b>Autumn</b>	<b>Number and Place Value –Year 2 to 100 Year 3 to 1,000</b> <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 &lt;, &gt; 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> Year 1: read and write numbers to at least 100 in numerals and words  <ul style="list-style-type: none"> <li>♣ count from 0 in multiples of 4, 8, 50 and 100;</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>♣ 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>			<b>Addition and subtraction – Year 2 within 100 (inc money) Year 3 within 1000 (inc money)</b> <ul style="list-style-type: none"> <li>♣ solve problems with addition and subtraction: 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> <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, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers</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 solve missing number problems.</li> <li>♣ recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</li> <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> </ul> <ul style="list-style-type: none"> <li>♣ add and subtract amounts of money to give change, using both £ and p in practical contexts</li> <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>						<b>Multiplication</b> <ul style="list-style-type: none"> <li>♣ count in steps of 2, 3, 5 and 3 from 0, and in tens from any number, forward and backward</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> <li>♣ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</li> <li>♣ Recall and use multiplication and division facts for 2,5, and 10 times tables, including recognising odd and even numbers</li> </ul> <ul style="list-style-type: none"> <li>♣ count from 0 in multiples of 4, 8</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 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 positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</li> </ul>		

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Spring	Division <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 (<math>=</math>) 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, and multiplication and division facts, including problems in contexts.</li> </ul> <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 positive integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects.</li> </ul>		Statistics <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> <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>		Measurement – Length and Height <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, scales,</li> <li>compare and order lengths and record the results using <math>&gt;</math>, <math>&lt;</math> and</li> <li>measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g), volume and capacity (l/ml)</li> <li>measure the perimeter of simple 2-D shapes</li> </ul>		Geometry: Year 2: Shape, Position and Direction Year 3: Shape and Perimeter <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> <li>compare and sort common 2-D and 3-D shapes and everyday objects</li> <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-quarter turns (clockwise and anticlockwise).</li> <li>draw 2-D shapes and make 3-D shapes using modelling materials;</li> <li>recognise 3-D 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> <li>measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g), volume and capacity (l/ml)</li> <li>measure the perimeter of simple 2-D shapes</li> </ul>		Number: Year 2 Fractions and Consolidation Year 3: Fractions <ul style="list-style-type: none"> <li>recognise, find, name and write fractions <math>\frac{1}{2}</math>, <math>\frac{1}{3}</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> <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 [for example, <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>			

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12		
Summer	Measurement: Time ♣ <i>compare and sequence intervals of time</i> ♣ <i>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</i> ♣ <i>know the number of minutes in an hour and the number of hours in a day</i>  ♣ <i>tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</i> ♣ <i>estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</i> ♣ <i>know the number of seconds in a minute and the number of days in each month, year and leap year</i> ♣ <i>compare durations of events [for example to calculate the time taken by particular events or tasks].</i>		Problem solving and efficient methods <b>Year 2</b> <i>Use assessment to address gaps in learning and possibly statutory assessments</i>  Year 3 Recap on the four operations Use assessment knowledge to address gaps in learning			Measurement Year 2: Mass, Capacity and temperature Year 3: Mass and Capacity ♣ <i>Choose and use appropriate standard units to estimate and measure (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using thermometers and measuring vessels</i> ♣ <i>compare and order, mass, volume/capacity and record the results using &gt;, &lt; and =</i>  ♣ <i>measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)</i>			Consolidation and Investigations <i>Use assessment to consolidate any areas which require development.</i>  Year 3 Recap Fractions and SSM. ♣ <i>Use data to identify any areas which require further development</i>					

Maths Year 2 and 3: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	<b>Number and Place Value –Year 2 to 100 Year 3 to 1,000</b> <ul style="list-style-type: none"> <li>♣ count from 0 in multiples of 4, 8, 50 and 100;</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>♣ 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> <li><i>♣ count in multiples of 6, 7, 9, 25 and 1000</i></li> <li><i>♣ find 1000 more or less than a given number</i></li> <li><i>♣ count backwards through zero to include negative numbers</i></li> <li><i>♣ recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)</i></li> <li><i>♣ order and compare numbers beyond 1000</i></li> <li><i>♣ identify, represent and estimate numbers using different representations</i></li> <li><i>♣ round any number to the nearest 10, 100 or 1000</i></li> <li><i>♣ solve number and practical problems that involve all of the above and with increasingly large positive numbers</i></li> <li><i>♣ read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</i></li> </ul>			<b>Number: Addition and subtraction)</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> <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> <li><i>♣ add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</i></li> <li><i>♣ estimate and use inverse operations to check answers to a calculation</i></li> <li><i>♣ solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</i></li> </ul>				<b>Number: Multiplication and division</b> <ul style="list-style-type: none"> <li>♣ count from 0 in multiples of 4, 8</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 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 positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</li> <li><i>♣ recall multiplication and division facts for multiplication tables up to 12 x 12</i></li> <li><i>♣ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</i></li> <li><i>♣ count in multiples of 6, 7, 9, 25 and 1000</i></li> <li><i>♣ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers</i></li> <li><i>♣ recognise and use factor pairs and commutativity in mental calculations</i></li> </ul>				

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Spring	<b>Number: Multiplication and division</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 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 positive integer scaling problems and correspondence problems in which n objects are connected to m objects.</li> </ul> <p><i>♣ recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></i></p> <p><i>♣ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers</i></p> <p><i>♣ recognise and use factor pairs and commutativity in mental calculations</i></p> <p><i>♣ multiply two-digit and three-digit numbers by a one-digit number using formal written layout</i></p> <p><i>♣ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</i></p>		Length: Perimeter and area  <ul style="list-style-type: none"> <li>♣ measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g), volume and capacity (l/ml)</li> <li>♣ measure the perimeter of simple 2-D shapes</li> </ul> <p><i>♣ Convert between different units of measure [for example, kilometre to metre; hour to minute]</i></p> <p><i>♣ measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</i></p> <p><i>♣ find the area of rectilinear shapes by counting squares</i></p>	Year 3: Fractions  <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 [for example, <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> <p><i>♣ recognise and show, using diagrams, families of common equivalent fractions</i></p> <p><i>♣ count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</i></p> <p><i>♣ solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number</i></p> <p><i>♣ add and subtract fractions with the same denominator</i></p>				Y3: Measurement: Mass and Capacity  <ul style="list-style-type: none"> <li>♣ measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)</li> </ul> Y4: Number: Decimals  <p><i>♣ recognise and write decimal equivalents of any number of tenths or hundredths</i></p> <p><i>♣ find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</i></p> <p><i>♣ solve simple measure and money problems involving fractions and decimals to two decimal places.</i></p> <p><i>♣ Convert between different units of measure e.g. metres to kilometres.</i></p>				

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12		
Summer	Number: Decimals (including money) ♣ add and subtract amounts of money to give change, using both £ and p in practical contexts ♣ <i>compare numbers with the same number of decimal places up to two decimal places</i> ♣ <i>round decimals with one decimal place to the nearest whole number</i> ♣ <i>recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math></i> ♣ <i>find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</i> ♣ <i>estimate, compare and calculate different measures, including money in pounds and pence</i> ♣ <i>solve simple measure and money problems involving fractions and decimals to two decimal places.</i>		Measurement: Time ♣ 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 and hours; use vocabulary such as o'clock, 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]. ♣ <i>read, write and convert time between analogue and digital 12- and 24-hour clocks</i> ♣ <i>solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</i>			Statistics ♣ interpret and present data using bar charts, pictograms and tables ♣ 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. ♣ <i>interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.</i> ♣ <i>solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</i>			Geometry: Properties of shape (including in Y4 position and direction) ♣ draw 2-D shapes and make 3-D shapes using modelling materials; ♣ recognise 3-D shapes in different orientations and describe them ♣ recognise angles as 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 ♣ <i>compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</i> ♣ <i>identify acute and obtuse angles and compare and order angles up to two right angles by size</i> ♣ <i>identify lines of symmetry in 2-D shapes presented in different orientations</i> ♣ <i>complete a simple symmetric figure with respect to a specific line of symmetry</i> ♣ <i>describe positions on a 2-D grid as coordinates in the first quadrant</i> ♣ <i>describe movements between positions as translations of a given unit to the left/right and up/down</i> ♣ <i>plot specified points and draw sides to complete a given polygon.</i> <i>(not found in WRM)</i>					

Maths Year 3 and 4: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL

Maths Medium Term Plan *Year 4* and Year 5

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	<b>Number and Place Value –Year 2 to 100 Year 3 to 1,000</b> <ul style="list-style-type: none"> <li>♣ count in multiples of 6, 7, 9, 25 and 1000</li> <li>♣ find 1000 more or less than a given number</li> <li>♣ count backwards through zero to include negative numbers</li> <li>♣ recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)</li> <li>♣ order and compare numbers beyond 1000</li> <li>♣ identify, represent and estimate numbers using different representations</li> <li>♣ round any number to the nearest 10, 100 or 1000</li> <li>♣ solve number and practical problems that involve all of the above and with increasingly large positive numbers</li> <li>♣ read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</li> <li>♣ read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li> <li>♣ count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</li> <li>♣ interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</li> <li>♣ round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> <li>♣ solve number problems and practical problems that involve all of the above</li> <li>♣ read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>				<b>Number: Addition and subtraction</b> <ul style="list-style-type: none"> <li>♣ add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</li> <li>♣ estimate and use inverse operations to check answers to a calculation</li> <li>♣ solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</li> <li>♣ add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</li> <li>♣ add and subtract numbers mentally with increasingly large numbers</li> <li>♣ use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>♣ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>			<b>Number: Multiplication and division</b> <ul style="list-style-type: none"> <li>♣ recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> <li>♣ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as <math>n</math> objects are connected to <math>m</math> objects.</li> <li>♣ count in multiples of 6, 7, 9, 25 and 1000</li> <li>♣ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers</li> <li>♣ recognise and use factor pairs and commutativity in mental calculations</li> <li>♣ recognise and use factor pairs and commutativity in mental calculations</li> <li>♣ multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> <li>♣ multiply and divide numbers mentally drawing upon known facts               <ul style="list-style-type: none"> <li>♣ multiply by 10, 100 and 1000</li> </ul> </li> <li>♣ identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>♣ know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers</li> <li>♣ establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>♣ recognise and use square numbers and cube numbers, and the notation for squared (<math>^2</math>) and cubed (<math>^3</math>)</li> <li>♣ solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>♣ solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> </ul>			<b>Measurement: Perimeter and area</b> <ul style="list-style-type: none"> <li>♣ Convert between different units of measure [for example, kilometre to metre; hour to minute]</li> <li>♣ measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</li> <li>♣ find the area of rectilinear shapes by counting squares</li> <li>♣ measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</li> <li>♣ calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (<math>\text{cm}^2</math>) and square metres (<math>\text{m}^2</math>) and estimate the area of irregular shapes.</li> </ul>	

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12		
Spring	<b>Number: Multiplication and division</b>  <ul style="list-style-type: none"> <li>♣ recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> <li>♣ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers</li> <li>♣ recognise and use factor pairs and commutativity in mental calculations</li> <li>♣ multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> <li>♣ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as <math>n</math> objects are connected to <math>m</math> objects.</li> <li>♣ multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</li> <li>♣ multiply and divide numbers mentally drawing upon known facts</li> <li>♣ divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</li> <li>♣ solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> </ul>		<b>Number: Fractions</b>  <ul style="list-style-type: none"> <li>♣ recognise and show, using diagrams, families of common equivalent fractions</li> <li>♣ count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</li> <li>♣ solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number</li> <li>♣ add and subtract fractions with the same denominator</li> <li>♣ compare and order fractions whose denominators are all multiples of the same number</li> <li>♣ identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>♣ recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math> as a mixed number [for example, <math>2/5 + 4/5 = 6/5 = 1 \frac{1}{5}</math>]</li> <li>♣ add and subtract fractions with the same denominator and denominators that are multiples of the same number</li> <li>♣ multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> <li>♣ read and write decimal numbers as fractions [for example, <math>0.71 = 71/100</math>]</li> <li>♣ solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> </ul>						<b>Number: Decimals</b>  <ul style="list-style-type: none"> <li>♣ recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>♣ find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</li> <li>♣ solve simple measure and money problems involving fractions and decimals to two decimal places.</li> <li>♣ Convert between different units of measure e.g. metres to kilometres.</li> <li>♣ compare numbers with the same number of decimal places up to two decimal places</li> <li>♣ round decimals with one decimal place to the nearest whole number</li> <li>♣ recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math></li> <li>♣ find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</li> <li>♣ read, write, order and compare numbers with up to three decimal places</li> <li>♣ recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>♣ round decimals with two decimal places to the nearest whole number and to one decimal place</li> <li>♣ solve problems involving number up to three decimal places</li> <li>♣ recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal</li> <li>♣ solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> <li>♣ Recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>♣ Find the effect of dividing a one or two-digit number to 10 or 100, identify the value of the digits in the answer as ones, tenths and hundredths</li> <li>♣ Solve simple measure and money problems involving fractions and decimals to two decimal places</li> <li>♣ convert between different units of measure (for example km to m)</li> </ul>					

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Summer	Number: Decimals (including money) <ul style="list-style-type: none"> <li>♣ compare numbers with the same number of decimal places up to two decimal places</li> <li>♣ round decimals with one decimal place to the nearest whole number</li> <li>♣ recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math></li> <li>♣ find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</li> <li>♣ estimate, compare and calculate different measures, including money in pounds and pence</li> <li>♣ solve simple measure and money problems involving fractions and decimals to two decimal places.</li> </ul>	Measurement: Time <ul style="list-style-type: none"> <li>♣ between analogue and digital 12- and 24-hour clocks</li> <li>♣ solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</li> <li>♣ solve problems involving converting between units of time</li> </ul>	Statistics <ul style="list-style-type: none"> <li>♣ interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.</li> <li>♣ solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</li> <li>♣ solve comparison, sum and difference problems using information presented in a line graph</li> <li>♣ complete, read and interpret information in tables, including timetables</li> </ul>	Geometry: Properties of shape <ul style="list-style-type: none"> <li>♣ compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</li> <li>♣ identify acute and obtuse angles and compare and order angles up to two right angles by size</li> <li>♣ identify lines of symmetry in 2-D shapes presented in different orientations</li> <li>♣ complete a simple symmetric figure with respect to a specific line of symmetry</li> </ul> identify 3-D shapes, including cubes and other cuboids, from 2-D representations <ul style="list-style-type: none"> <li>♣ know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</li> <li>♣ draw given angles, and measure them in degrees (<math>^{\circ}</math>)</li> <li>♣ identify: angles at a point and one whole turn (total <math>360^{\circ}</math>), angles at a point on a straight line and <math>1/2</math> a turn (total <math>180^{\circ}</math>), other multiples of <math>90^{\circ}</math></li> <li>♣ use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>♣ distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> </ul>	Geometry: Position and Direction <ul style="list-style-type: none"> <li>♣ describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>♣ describe movements between positions as translations of a given unit to the left/right and up/down</li> <li>♣ plot specified points and draw sides to complete a given polygon. (not found in WRM)</li> <li>♣ identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed</li> </ul>	Y4 consolidation <ul style="list-style-type: none"> <li>♣ Convert between different units of measure [for example, kilometre to metre; hour to minute]</li> </ul> Y5 Converting Units and volume <ul style="list-style-type: none"> <li>♣ convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</li> <li>♣ solve problems involving converting between units of time</li> <li>♣ understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</li> <li>♣ estimate volume [for example, using 1 cm<sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]</li> <li>♣ use all four operations to solve problems involving measure</li> </ul>	Consolidation					

Maths Year 4 and 5: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL

Maths Medium Term Plan Year 5 *and Year 6*

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12							
Autumn	<b>Number and Place Value</b> <ul style="list-style-type: none"> <li>♣ read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li> <li>♣ count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</li> <li>♣ interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</li> <li>♣ round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> <li>♣ solve number problems and practical problems that involve all of the above</li> <li>♣ read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>		<b>Number: Four Operations</b> <ul style="list-style-type: none"> <li>♣ add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</li> <li>♣ add and subtract numbers mentally with increasingly large numbers</li> <li>♣ use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</li> <li>♣ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>♣ multiply and divide numbers mentally drawing upon known facts</li> <li>♣ multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</li> <li>♣ divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</li> <li>♣ identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>♣ multiply by 10,100 and 1000</li> <li>♣ know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers</li> <li>♣ establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>♣ recognise and use square numbers and cube numbers, and the notation for squared ( <sup>2</sup> ) and cubed ( <sup>3</sup> )</li> <li>♣ solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>♣ solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> <li>♣ solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> </ul>						<b>Number: Fractions</b> <ul style="list-style-type: none"> <li>♣ compare and order fractions whose denominators are all multiples of the same number</li> <li>♣ identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>♣ recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math> as a mixed number [for example, <math>2/5 + 4/5 = 6/5 = 1 1/5</math>]</li> <li>♣ add and subtract fractions with the same denominator and denominators that are multiples of the same number</li> <li>♣ multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</li> <li>♣ read and write decimal numbers as fractions [for example, <math>0.71 = 71/100</math>]</li> <li>♣ solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> </ul>										
			<ul style="list-style-type: none"> <li>♣ <i>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit required degree of accuracy</i></li> <li>♣ <i>round any whole number to a required degree of accuracy</i></li> <li>♣ <i>use negative numbers in context, and calculate intervals across zero</i></li> <li>♣ <i>solve number and practical problems that involve all of the above</i></li> </ul>						<ul style="list-style-type: none"> <li>♣ <i>multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</i></li> <li>♣ <i>divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</i></li> <li>♣ <i>divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context</i></li> <li>♣ <i>perform mental calculations, including with mixed operations and large numbers</i></li> <li>♣ <i>identify common factors, common multiples and prime numbers</i></li> <li>♣ <i>use their knowledge of the order of operations to carry out calculations involving the four operations</i></li> <li>♣ <i>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Mathematics</i></li> <li>♣ <i>solve problems involving addition, subtraction, multiplication and division</i></li> <li>♣ <i>use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</i></li> </ul>						<ul style="list-style-type: none"> <li>♣ <i>use common factors to simplify fractions; use common multiples to express fractions in the same denomination</i></li> <li>♣ <i>compare and order fractions, including fractions <math>&gt; 1</math></i></li> <li>♣ <i>add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</i></li> <li>♣ <i>multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, <math>1/4 \times 1/2 = 1/8</math> ]</i></li> <li>♣ <i>divide proper fractions by whole numbers [for example, <math>1/3 \div 2 = 1/6</math>]</i></li> <li>♣ <i>associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 1/8]</i></li> </ul>				

**Number: Decimals and Percentages**

- ♣ read, write, order and compare numbers with up to three decimal places
- ♣ recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents
- ♣ round decimals with two decimal places to the nearest whole number and to one decimal place
- ♣ solve problems involving number up to three decimal places
- ♣ recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal
- ♣ solve problems which require knowing percentage and decimal equivalents of  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{4}{5}$  and those fractions with a denominator of a multiple of 10 or 25.
- ♣ Find the effect of dividing a one or two-digit number to 10 or 100, identify the value of the digits in the answer as ones, tenths and hundredths
  - ♣ *identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places*
  - ♣ *multiply one-digit numbers with up to two decimal places by whole numbers*
  - ♣ *use written division methods in cases where the answer has up to two decimal places*
  - ♣ *solve problems which require answers to be rounded to specified degrees of accuracy*
  - ♣ *solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison*
  - ♣ *recall and use equivalences between simple fractions, decimals and percentages, including in different context*

**Y5: Number: Decimals**

- ♣ Recognise and write decimal equivalents of any number of tenths or hundredths
- ♣ Find the effect of dividing a one or two-digit number to 10 or 100, identify the value of the digits in the answer as ones, tenths and hundredths
- ♣ Solve simple measure and money problems involving fractions and decimals to two decimal places
- ♣ convert between different units of measure (for example km to m)

**Y6: Number: Algebra**

- ♣ *use simple formulae*
- ♣ *generate and describe linear number sequences*
- ♣ *express missing number problems algebraically*
- ♣ *find pairs of numbers that satisfy an equation with two unknowns*
- ♣ *enumerate possibilities of combinations of two variables*

*Teachers may choose to recap adding and subtracting decimals.*

**Measurement: Converting Units**

- ♣ convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
- ♣ solve problems involving converting between units of time
- ♣ understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints

- ♣ *solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate*
- ♣ *use, read, write and convert between standard units, converting measurements of length, mass, volume and*

**Measurement: Perimeter, Area and Volume**

- ♣ measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- ♣ calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes.
- ♣ estimate volume [for example, using 1 cm<sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]
- ♣ use all four operations to solve problems involving measure
- ♣ *recognise that shapes with the same areas can have different perimeters and vice versa*
- ♣ *recognise when it is possible to use formulae for area and volume of shapes*
- ♣ *calculate the area of parallelograms and triangles*
- ♣ *calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units [for example, mm<sup>3</sup> and km<sup>3</sup>].*

**Y5: Consolidation: Fractions**

Use assessment to identify gaps in learning to be consolidated for the large amount of content to be covered in the Autumn term

**Y6: Number: Ratio**

- ♣ *solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts*
- ♣ *solve problems involving similar shapes where the scale factor is known or can be found*
- ♣ *solve problems involving unequal sharing and grouping using knowledge of fractions and multiples*

**Statistic**

- ♣ solve comparison, sum and difference problems using information presented in a line graph
- ♣ complete, read and interpret information in tables, including timetables
- ♣ *illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius*
- ♣ *interpret and construct pie charts and line graphs and use these to solve problems*
- ♣ *calculate and interpret the mean as an average.*

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
						<i>time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places</i> ♣ <i>convert between miles and kilometres</i>						
Summer	Geometry: Properties of shape ♣ identify 3-D shapes, including cubes and other cuboids, from 2-D representations ♣ know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles ♣ draw given angles, and measure them in degrees (°) ♣ identify: angles at a point and one whole turn (total 360°) angles at a point on a straight line and ½ a turn (total 180°), other multiples of 90° ♣ use the properties of rectangles to deduce related facts and find missing lengths and angles ♣ distinguish between regular and irregular polygons based on reasoning about equal sides and angles. <i>♣ draw 2-D shapes using given dimensions and angles</i> <i>♣ recognise, describe and build simple 3-D shapes, including making nets</i> <i>♣ compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</i> <i>♣ recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</i>		Geometry: Position and Direction ♣ identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed <i>♣ describe positions on the full coordinate grid (all four quadrants)</i> <i>♣ draw and translate simple shapes on the coordinate plane, and reflect them in the axes</i>		Y5: Consolidation: Four Operations Use assessment data to consolidate gaps in learning		Y5: Consolidation FDP Use assessment data to consolidate gaps in learning		Y5: consolidation: Measures Use assessment data to consolidate gaps in learning		Consolidation	
	<i>Y6: Assessment</i> <i>During this time, it is likely that children will be undertaking their SATS</i>					<i>Year 6</i> <i>Investigations</i>						

Maths Year 5 and 6: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL



## **LSP Maths Plans**

**2020-2021**

### **Year Specific Medium Term Plans**

## Medium Term Plan Year 1

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn	Number and Place Value – within 10 ♣ count to and across 10, forwards and backwards, beginning with 0 or 1, or from any given number ♣ count, read and write numbers to 10 in numerals; count in multiples of 2s, 5s and 10s ♣ given a number, identify 1 more and 1 less ♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least				Addition and subtraction – within 10 ♣ read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ♣ represent and use number bonds and related subtraction facts within 10 ♣ add and subtract one-digit and two-digit numbers to 20, including 0 ♣ solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$				Shape ♣ recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles] ♣ recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]		Number and Place Value – within 20 ♣ count to and across 20 forwards and backwards, beginning with 0 or 1, or from any given number ♣ count, read and write numbers to 20 in numerals and words ♣ given a number, identify 1 more and 1 less ♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least		Consolidation
Spring	Addition and subtraction – within 20 ♣ read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs ♣ represent and use number bonds and related subtraction facts within 20 ♣ add and subtract one-digit and two-digit numbers to 20, including 0 ♣ solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$				Number and Place Value – within 50 ♣ count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number ♣ count, read and write numbers to 50 in numerals and words; ♣ count in multiples of 2s, 5s ♣ given a number, identify 1 more and 1 less ♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least			Measurement ♣ Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] ♣ measure and begin to record the following: lengths and height			Measurement ♣ Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than] ♣ capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] ♣ measure and begin to record the following: mass/weight capacity and volume		Consolidation
Summer	Multiplication and division ♣ Count in multiples of 2,5 and 10 ♣ 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			Fractions ♣ recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity ♣ recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity ♣ Compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] ♣ Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than]		Position and direction ♣ describe position, direction and movement, including whole, half, quarter and three-quarter turns	Number and place value -within 100 ♣ count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number ♣ count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s ♣ given a number, identify 1 more and 1 less ♣ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least		Money ♣ recognise and know the value of different denominations of coins and notes	Time ♣ Measure and begin to record time [for example, quicker, slower, earlier, later] time (hours, minutes, seconds) ♣ sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] ♣ recognise and use language relating to dates, including days of the week, weeks, months and years ♣ tell the time to the hour and half past the hour and draw the hands on a clock face to show these times		Consolidation	

## Maths Medium Term Plan Year 2

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	<b>Number and place value</b> <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 &lt;, &gt; 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> Year 1: read and write numbers to at least 100 in numerals and words			<b>Number: Addition and Subtraction</b> <ul style="list-style-type: none"> <li>♣ solve problems with addition and subtraction: 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> <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> <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>				<b>Measurement and money</b> <ul style="list-style-type: none"> <li>♣ recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</li> <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> </ul>			<b>Multiplication and division</b> <ul style="list-style-type: none"> <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, and multiplication and division facts, including problems in contexts.</li> <li>♣ recall and use multiplication and division facts for 2,5,and 10 times tables, including recognising odd and even numbers</li> </ul>	

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
<b>Spring</b>	<b>Multiplication and division</b> ♣ recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers ♣ calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs ♣ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot ♣ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.		<b>Number and Statistics</b> ♣ interpret and construct simple pictograms, tally charts, block diagrams and simple tables ♣ ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ♣ ask and answer questions about totalling and comparing categorical data.		<b>Geometry: Property of Shape</b> ♣ identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line ♣ identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces ♣ identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid] ♣ compare and sort common 2-D and 3-D shapes and everyday objects			<b>Number: Fractions</b> ♣ recognise, find, name and write fractions $\frac{1}{2}$ , $\frac{1}{3}$ , $\frac{2}{4}$ , and $\frac{3}{4}$ of a length, shape, set of objects or quantity ♣ write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ .			<b>Length and height</b> ♣ choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); using rulers, scales, ♣ compare and order lengths and record the results using >, < and =		<b>Consolidation</b>
<b>Summer</b>	<b>Geometry: position and direction</b> ♣ order and arrange combinations of mathematical objects in patterns and sequences ♣ 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-quarter turns (clockwise and anticlockwise).			<b>Problem solving efficient methods</b>		<b>Measurement: Time</b> ♣ compare and sequence intervals of time ♣ 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 ♣ know the number of minutes in an hour and the number of hours in a day		<b>Measurement: Mass. Capacity and temperature</b> ♣ Choose and use appropriate standard units to estimate and measure (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using thermometers and measuring vessels ♣ compare and order, mass, volume/capacity and record the results using >, < and =			<b>Investigations</b>		

Year 2: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL.

## Maths Medium Term Plan Year 3

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn	Number and Place Value ♣ count from 0 in multiples of 4, 8, 50 and 100; ♣ find 10 or 100 more or less than a given number ♣ recognise the place value of each digit in a three-digit number (hundreds, tens, 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 ♣ solve number problems and practical problems involving these ideas			Addition and subtraction ♣ 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> ♣ add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction ♣ estimate the answer to a calculation and use inverse operations to check answers ♣ solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.				Number: Multiplication and Division ♣ count from 0 in multiples of 4, 8 ♣ recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ♣ 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 ♣ 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 objects.					Consolidation
Spring	Number: Multiplication and Division ♣ recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ♣ 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 ♣ 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 objects.			Measurement: Money ♣ add and subtract amounts of money to give change, using both £ and p in practical contexts	Statistics ♣ interpret and present data using bar charts, pictograms and tables ♣ 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.	Measurement: Length and Perimeter ♣ measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g), volume and capacity (l/ml) ♣ measure the perimeter of simple 2-D shapes			Number: Fractions ♣ 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 ♣ recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ♣ recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators ♣ solve problems that involve all of the above.			Consolidation	
Summer	Number: Fractions ♣ recognise and show, using diagrams, equivalent fractions with small denominators ♣ add and subtract fractions with the same denominator within one whole [for example, $5/7 + 1/7 = 6/7$ ] ♣ compare and order unit fractions, and fractions with the same denominators ♣ solve problems that involve all of the above			Measurement: Time ♣ 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 and hours; use vocabulary such as o'clock, 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].			Geometry: Properties of Shape ♣ draw 2-D shapes and make 3-D shapes using modelling materials; ♣ recognise 3-D shapes in different orientations and describe them ♣ recognise angles as 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		Measurement: Capacity ♣ measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)			Consolidation	

Year 3: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL.

## Maths Medium Term Plan Year 4

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12		
Autumn	Number and Place Value <ul style="list-style-type: none"> <li>♣ count in multiples of 6, 7, 9, 25 and 1000</li> <li>♣ find 1000 more or less than a given number</li> <li>♣ count backwards through zero to include negative numbers</li> <li>♣ recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)</li> <li>♣ order and compare numbers beyond 1000</li> <li>♣ identify, represent and estimate numbers using different representations</li> <li>♣ round any number to the nearest 10, 100 or 1000</li> <li>♣ solve number and practical problems that involve all of the above and with increasingly large positive numbers</li> <li>♣ read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.</li> </ul>				Addition and subtraction <ul style="list-style-type: none"> <li>♣ add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</li> <li>♣ estimate and use inverse operations to check answers to a calculation</li> <li>♣ solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</li> </ul>			Measurement: Length and Perimeter <ul style="list-style-type: none"> <li>♣ Convert between different units of measure [for example, kilometre to metre; hour to minute]</li> <li>♣ measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</li> </ul>		Number: Multiplication and Division <ul style="list-style-type: none"> <li>♣ recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> <li>♣ <i>solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit</i>, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</li> <li>♣ count in multiples of 6, 7, 9, 25 and 1000</li> <li>♣ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers</li> </ul>				Consolidation
Spring	Number: Multiplication and Division <ul style="list-style-type: none"> <li>♣ recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math></li> <li>♣ use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers</li> <li>♣ recognise and use factor pairs and commutativity in mental calculations</li> <li>♣ multiply two-digit and three-digit numbers by a one-digit number using formal written layout</li> <li>♣ solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</li> </ul>		Measurement: Area <ul style="list-style-type: none"> <li>♣ find the area of rectilinear shapes by counting squares</li> </ul>		Number: Fractions <ul style="list-style-type: none"> <li>♣ recognise and show, using diagrams, families of common equivalent fractions</li> <li>♣ count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</li> <li>♣ solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number</li> <li>♣ add and subtract fractions with the same denominator</li> </ul>			Number: Decimals <ul style="list-style-type: none"> <li>♣ recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>♣ find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</li> <li>♣ solve simple measure and money problems involving fractions and decimals to two decimal places.</li> <li>♣ Convert between different units of measure e.g. metres to kilometres.</li> </ul>				Consolidation		

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Summer	Number: Decimals ♣ compare numbers with the same number of decimal places up to two decimal places ♣ round decimals with one decimal place to the nearest whole number ♣ recognise and write decimal equivalents to $\frac{1}{4}$ , $\frac{1}{2}$ , $\frac{3}{4}$ ♣ find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	Measurement: Money ♣ estimate, compare and calculate different measures, including money in pounds and pence ♣ solve simple measure and money problems involving fractions and decimals to two decimal places.			Measurement: Time ♣ read, write and convert time between analogue and digital 12- and 24-hour clocks ♣ solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.		Statistics ♣ interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. ♣ solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	Geometry: Properties of Shape ♣ compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes ♣ identify acute and obtuse angles and compare and order angles up to two right angles by size ♣ identify lines of symmetry in 2-D shapes presented in different orientations ♣ complete a simple symmetric figure with respect to a specific line of symmetry			Geometry: Position and direction ♣ describe positions on a 2-D grid as coordinates in the first quadrant ♣ describe movements between positions as translations of a given unit to the left/right and up/down <b>♣ plot specified points and draw sides to complete a given polygon.</b> <b>Can't find in WRM</b>	Consolidation

Year 4: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL.

## Maths Medium Term Plan Year 5

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number and Place Value ♣ read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit ♣ count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 ♣ interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero ♣ round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 ♣ solve number problems and practical problems that involve all of the above ♣ read Roman numerals to 1000 (M) and recognise years written in Roman numerals.			Addition and subtraction ♣ add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) ♣ add and subtract numbers mentally with increasingly large numbers ♣ use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy ♣ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.		Statistics ♣ solve comparison, sum and difference problems using information presented in a line graph ♣ complete, read and interpret information in tables, including timetables		Number: Multiplication and Division ♣ multiply and divide numbers mentally drawing upon known facts ♣ multiply by 10, 100 and 1000 ♣ identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers ♣ know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers ♣ establish whether a number up to 100 is prime and recall prime numbers up to 19 ♣ recognise and use square numbers and cube numbers, and the notation for squared ( $^2$ ) and cubed ( $^3$ ) ♣ solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes ♣ solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.		Measurement: Area and Perimeter ♣ measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres ♣ calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres ( $\text{cm}^2$ ) and square metres ( $\text{m}^2$ ) and estimate the area of irregular shapes.		Consolidation
Spring	Number: Multiplication and Division ♣ multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers ♣ multiply and divide numbers mentally drawing upon known facts ♣ divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context ♣ solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign			Number: Fractions ♣ compare and order fractions whose denominators are all multiples of the same number ♣ identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths ♣ recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $> 1$ as a mixed number [for example, $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$ ] ♣ add and subtract fractions with the same denominator and denominators that are multiples of the same number ♣ multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams ♣ read and write decimal numbers as fractions [for example, $0.71 = 71/100$ ] ♣ solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.					Number: Decimals and Percentages ♣ read, write, order and compare numbers with up to three decimal places ♣ recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents ♣ round decimals with two decimal places to the nearest whole number and to one decimal place ♣ solve problems involving number up to three decimal places ♣ recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal ♣ solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{1}{5}$ , $\frac{2}{5}$ , $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.		Consolidation	

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Summer	Number: Decimals <ul style="list-style-type: none"> <li>♣ Recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>♣ Find the effect of dividing a one or two-digit number to 10 or 100, identify the value of the digits in the answer as ones, tenths and hundredths</li> <li>♣ Solve simple measure and money problems involving fractions and decimals to two decimal places</li> <li>♣ convert between different units of measure (for example km to m)</li> </ul>				Geometry: Properties of Shape <ul style="list-style-type: none"> <li>♣ identify 3-D shapes, including cubes and other cuboids, from 2-D representations</li> <li>♣ know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</li> <li>♣ draw given angles, and measure them in degrees (<math>^{\circ}</math>)</li> <li>♣ identify: angles at a point and one whole turn (total <math>360^{\circ}</math>) angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total <math>180^{\circ}</math>), other multiples of <math>90^{\circ}</math></li> <li>♣ use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>♣ distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> </ul>			Geometry: Position and Direction <ul style="list-style-type: none"> <li>♣ identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed</li> </ul>	Measurement: Converting Units <ul style="list-style-type: none"> <li>♣ convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</li> <li>♣ solve problems involving converting between units of time</li> <li>♣ understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</li> </ul>	Measurement: Volume <ul style="list-style-type: none"> <li>♣ estimate volume [for example, using <math>1\text{ cm}^3</math> blocks to build cuboids (including cubes)] and capacity [for example, using water]</li> <li>♣ use all four operations to solve problems involving measure</li> </ul>	Consolidation	

## Maths Medium Term Plan Year 6

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn	Number and Place Value <ul style="list-style-type: none"> <li>♣ read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</li> <li>♣ round any whole number to a required degree of accuracy</li> <li>♣ use negative numbers in context, and calculate intervals across zero</li> <li>♣ solve number and practical problems that involve all of the above</li> </ul>		Number: Addition, subtraction and Multiplication and Division <ul style="list-style-type: none"> <li>♣ multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>♣ divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context</li> <li>♣ divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context</li> <li>♣ perform mental calculations, including with mixed operations and large numbers</li> <li>♣ identify common factors, common multiples and prime numbers</li> <li>♣ use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>♣ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>♣ solve problems involving addition, subtraction, multiplication and division</li> <li>♣ use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</li> </ul>				Number: Fractions <ul style="list-style-type: none"> <li>♣ use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>♣ compare and order fractions, including fractions <math>&gt; 1</math></li> <li>♣ add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>♣ multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>]</li> <li>♣ divide proper fractions by whole numbers [for example, <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>]</li> <li>♣ associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, <math>\frac{1}{8}</math>]</li> </ul>				Geometry: Position and Direction <ul style="list-style-type: none"> <li>♣ describe positions on the full coordinate grid (all four quadrants)</li> <li>♣ draw and translate simple shapes on the coordinate plane, and reflect them in the axes</li> </ul>		Consolidation

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Spring	Number: Decimals ♣ identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places ♣ multiply one-digit numbers with up to two decimal places by whole numbers ♣ use written division methods in cases where the answer has up to two decimal places ♣ solve problems which require answers to be rounded to specified degrees of accuracy		Number Percentages ♣ solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison ♣ recall and use equivalences between simple fractions, decimals and percentages, including in different context		Number: Algebra ♣ use simple formulae ♣ generate and describe linear number sequences ♣ express missing number problems algebraically ♣ find pairs of numbers that satisfy an equation with two unknowns ♣ enumerate possibilities of combinations of two variables		Measures: Converting Units ♣ solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate ♣ use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places ♣ convert between miles and kilometres		Measure: Area, Perimeter and Volume ♣ recognise that shapes with the same areas can have different perimeters and vice versa ♣ recognise when it is possible to use formulae for area and volume of shapes ♣ calculate the area of parallelograms and triangles ♣ calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm <sup>3</sup> ) and cubic metres (m <sup>3</sup> ), and extending to other units [for example, mm <sup>3</sup> and km <sup>3</sup> ].		Number: Ratio ♣ solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts ♣ solve problems involving similar shapes where the scale factor is known or can be found ♣ solve problems involving unequal sharing and grouping using knowledge of fractions and multiples		Consolidation

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Summer	Geometry: Properties of Shape ♣ draw 2-D shapes using given dimensions and angles ♣ recognise, describe and build simple 3-D shapes, including making nets ♣ compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons ♣ recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles		Problem Solving			Statistics ♣ illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius ♣ interpret and construct pie charts and line graphs and use these to solve problems ♣ calculate and interpret the mean as an average.		Investigations				Consolidation

Year 6: Medium term maths overview, with National Curriculum references, based on the White Rose Maths SOL.