



## KS1 LONG TERM MATHS PLAN 2019-2020

### From the National Curriculum

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio.

At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

### Maths at Westbury Park

We aim to inspire children to develop a love for maths and, as a staff team, we work closely together to promote risk taking, curiosity and enthusiasm for maths from Reception to year 6- and beyond!

We believe that there are fundamental mathematical skills that will provide children with a foundation for their learning: times tables, number bonds and formal written methods. These areas of maths are intertwined within most of our lessons, through chanting, tests, discrete teaching and reminders around the classroom. We aim to teach mental and written methods consistently across the school; these are detailed in our calculation policies.

Westbury Park is part of a Mastery Maths Hub, which gives us the opportunity to work closely with other local schools to enhance our maths teaching, share good practice and ultimately give the children the best possible maths education. Embracing the concept of mastery means that we encourage children to 'learn without limits'; we want them to feel supported and challenged to take the next steps within maths all the while knowing that they are learning at their pace. We encourage children to work together to reason and justify and to link their learning to life outside of the classroom. For those children who have a natural love for the subject, mastery helps to inspire them to look more deeply at their learning, to ask questions, to find alternatives and to use their skills to challenge what they think they know!

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
<b>YEAR 1</b>	Number: Place value within 10 (4 weeks)  Number: Addition and subtraction within 10 (2 weeks)	Number: Addition and subtraction within 10 (2 weeks)  Geometry: Shape (1 week)  Number: Place value within 20 (2 weeks)	Number: Addition and subtraction within 20 (4 weeks)  Number: Place value within 50 (2 weeks)	Number: Place value within 50 (1 week)  Measure: Length and height (2 weeks)  Measure: Weight and volume (2 weeks)	Number: Multiplication and division (3 weeks)  Number: Fractions (2 weeks)  Geometry: Position and direction (1 week)	Number: Place value within 100 (2 weeks)  Measure: Money (1 week)  Measure: Time (1 week)
<b>YEAR 2</b>	Number: Place value (3 weeks)  Number: Addition and subtraction (2 weeks)	Number: Addition and subtraction (2 weeks)  Measure: Money (2 weeks)  Number: Multiplication and division (2 weeks)	Number: Multiplication and division (2 weeks)  Statistics (2 weeks)  Geometry: Properties of shapes (2 weeks)	Geometry: Properties of shapes (1 week)  Number: Fractions (3 weeks)  Measure: Length and height (1 week)	Geometry: Position and direction (3 weeks)  Measure: Time (2 weeks)	Measure: Mass, capacity and temperature (3 weeks)  Problem solving and method using (2 weeks)



KS1 EXPECTATIONS AND STRANDS		YEAR 1	YEAR 2
Place value	Counting	<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 numbers to 100 in numerals; count in multiples of two, five and ten</li> </ul>	<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> </ul>
	Representing number	<ul style="list-style-type: none"> <li>Identify and represent numbers using objects and pictorial representations</li> <li>Read and write numbers to 100 in numerals</li> <li>Read and write numbers from 1 to 20 in numerals and words</li> </ul>	<ul style="list-style-type: none"> <li>Read and write numbers to 100 in numerals and words</li> <li>Identify, represent and estimate numbers using different representations including the number line</li> </ul>
	Using and comparing number	<ul style="list-style-type: none"> <li>Given a number, identify one more and one less</li> </ul>	<ul style="list-style-type: none"> <li>Recognise the place value of each digit in a two-digit number (tens and ones)</li> <li>compare and order numbers from 0 to 100 use <math>&lt;</math> <math>&gt;</math> <math>=</math> signs</li> </ul>
	Problem solving and rounding		<ul style="list-style-type: none"> <li>Use place value and number facts to solve problems</li> </ul>
Addition and subtraction	Recall, representation and use	<ul style="list-style-type: none"> <li>Read, write and interpret mathematical statements involving addition (+), subtractions (-) and equals (=) signs</li> <li>Represent and use number bonds and related subtraction facts within 20</li> </ul>	<ul style="list-style-type: none"> <li>Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100</li> <li>Show that addition of two numbers can be done in any order but subtraction 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>
	Calculations	<ul style="list-style-type: none"> <li>Add and subtract one and two digit numbers to 20 including zero</li> </ul>	<ul style="list-style-type: none"> <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> </ul>
	Problem solving	<ul style="list-style-type: none"> <li>Solve one step problems that involve addition and subtraction using concrete objects and pictorial representations and missing number problems such as <math>7 = ? - 9</math></li> </ul>	<ul style="list-style-type: none"> <li>Solve problems with addition and subtraction:                             <ul style="list-style-type: none"> <li>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> </ul> </li> </ul>
Multiplication and division	Recall, represent, use		<ul style="list-style-type: none"> <li>Recall multiplication and division facts for the 2, 5 and 10 times tables including recognising odd and even numbers</li> <li>Show that multiplication of two numbers can be done in any order and division cannot</li> </ul>
	Calculations		<ul style="list-style-type: none"> <li>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication and division signs as well as the equals</li> </ul>
	Problem solving	<ul style="list-style-type: none"> <li>Solve one step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with the support of a teacher</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving multiplying and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts including problems in contexts</li> </ul>
	Combined operations		



<b>Fractions</b>	<b>Recognise and write</b>	<ul style="list-style-type: none"><li>• Recognise, find and name a half as one of two equal parts of an object, a shape or a quantity</li><li>• Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity</li></ul>	<ul style="list-style-type: none"><li>• Recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity</li></ul>
	<b>Compare</b>		<ul style="list-style-type: none"><li>• Recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math></li></ul>
	<b>Calculations</b>		<ul style="list-style-type: none"><li>• Write simple fractions for example <math>\frac{1}{2}</math> of <math>6 = 3</math></li></ul>
	<b>Problem solving</b>		
<b>Decimals</b>	<b>Recognise and write</b>		
	<b>Compare</b>		
	<b>Calculations</b>		
	<b>Problem solving</b>		
<b>Fractions, decimals and percentages</b>			
<b>Ratio and Proportion</b>			
<b>Algebra</b>		(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 use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems



<b>Measurement</b>	<b>Using measures</b>	<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 numbers to 100 in numerals; count in multiples of twos, fives and tens</li> </ul>	<ul style="list-style-type: none"> <li>Choose and use appropriate standard units to estimate and measure length/height (cm, m etc.) mass (g and kg) temperature (degrees celsius) the nearest appropriate unit using rulers, scales, thermometers and measuring vessels</li> <li>Compare and order lengths, mass, volume and capacity and record the results using <math>&lt;</math> <math>&gt;</math> <math>=</math></li> </ul>
	<b>Money</b>	<ul style="list-style-type: none"> <li>Recognise and know the value of different denominations of coins and notes</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and use symbols for pounds and pence; combine amounts to make a particular value</li> <li>Find different combinations of coins that equal the same amounts of money</li> <li>Solve simple problems in a practical context involving addition and subtraction of money of the same unit including giving change</li> </ul>
	<b>Time</b>	<ul style="list-style-type: none"> <li>Sequence events in chronological order using language such as yesterday, tomorrow, morning, afternoon</li> <li>Recognise and use language relating to dates including days of the week, weeks, months and years</li> <li>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times</li> </ul>	<ul style="list-style-type: none"> <li>Compare and sequence intervals of time</li> <li>Tell and write the time to five minutes including quarter past/to the hour and draw the hands on a clock face to show these times</li> <li>Know the number of minutes in an hour and the number of hours in a day</li> </ul>
	<b>Perimeter, area &amp; volume</b>		

<b>Geometry</b>	<b>2-D shapes</b>	<ul style="list-style-type: none"> <li>Recognise and name common 2D shapes (rectangles, squares, circles and triangles)</li> </ul>	<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 2 D shapes on the surface of 3 D shapes (eg a circle on a cylinder)</li> <li>Compare and sort common 2 D shapes and everyday objects</li> </ul>
	<b>3-D shapes</b>	<ul style="list-style-type: none"> <li>Recognise and name common 3 D shapes (including cubes, cuboids, pyramids etc..)</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and name common 3 D shapes (including cubes, cuboids, pyramids etc..)</li> <li>Compare and sort common 3 D shapes and everyday objects</li> </ul>
	<b>Angles and lines</b>		
	<b>Position and Direction</b>	<ul style="list-style-type: none"> <li>Describe position, direction and movement, including whole, half, quarter and three quarter turns</li> </ul>	<ul style="list-style-type: none"> <li>Order and arrange combinations of mathematical objects in patterns or sequences</li> <li>Use mathematical vocabulary to describe position, direction and 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> </ul>

<b>Statistics</b>	<b>Present and interpret</b>		<ul style="list-style-type: none"> <li>Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</li> </ul>
	<b>Problem solving</b>		<ul style="list-style-type: none"> <li>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>Ask and answer questions about totalling and comparing categorical data</li> </ul>