

John Fletcher of Madeley Primary School  
Medium term planning – New Curriculum 2014

Year 5

Summer Term

Mathematical aspect			Curriculum statement
U & A	Unit 1	Number systems: roman numerals	<ul style="list-style-type: none"> <li>● To read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> <li>● To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.</li> <li>● To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.</li> <li>● To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.</li> <li>● To solve number problems and practical problems that involve all of the above.</li> </ul>
U & A	Unit 2	Addition and subtraction of large numbers	<ul style="list-style-type: none"> <li>● To add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).</li> <li>● To add and subtract numbers mentally with increasingly large numbers.</li> <li>● To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> <li>● To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li> <li>● To solve problems involving numbers up to three decimal places.</li> </ul>
U & A	Unit 3 & 4	Long multiplication and division with remainders	<ul style="list-style-type: none"> <li>● To multiply and divide numbers mentally drawing upon known facts.</li> <li>● To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.</li> <li>● To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> <li>● To 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>● To 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>● To solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.</li> </ul>
U & A	Unit 5	Fractions: calculation	<ul style="list-style-type: none"> <li>● To recognise mixed numbers and improper fractions and convert from one form to the other; write mathematical statements <math>&gt; 1</math> as a mixed number: <math>2/5 + 4/5 = 6/5 = 11/5</math>.</li> <li>● To add and subtract fractions with the same denominator and multiples of the same number.</li> </ul>
U & A	Unit 6	Geometry: Diagonals and problems involving angles	<ul style="list-style-type: none"> <li>● To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles</li> <li>● To draw given angles, and measure them in degrees (<math>^{\circ}</math>).</li> <li>● To identify:               <ul style="list-style-type: none"> <li>● angles at a point and one whole turn (total <math>360^{\circ}</math>)</li> <li>● angles at a point on a straight line and <math>1/2</math> a turn (total <math>180^{\circ}</math>)</li> <li>● other multiples of <math>90^{\circ}</math>.</li> </ul> </li> <li>● To use the properties of a rectangle to deduce related facts and find</li> </ul>

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			<p>missing lengths and angles.</p> <ul style="list-style-type: none"> <li>● To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> </ul>
U & A	Unit 7	Measurement: Volume, time and money	<ul style="list-style-type: none"> <li>● To estimate volume (e.g. using 1 cm<sup>3</sup> blocks to build cubes and cuboids) and capacity (e.g. using water).</li> <li>● To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling</li> <li>● To solve problems involving converting between units of time.</li> </ul>
U & A	Unit 8	All four operations: money	<ul style="list-style-type: none"> <li>● To use all four operations with whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).</li> <li>● To calculate numbers mentally with increasingly large numbers.</li> <li>● To solve multi-step problems in contexts (money), deciding which operations and methods to use and why.</li> </ul>
U & A	Unit 9	Decimals and fractions	<ul style="list-style-type: none"> <li>● To read, write, order and compare numbers with up to three decimal places.</li> <li>● To read and write decimal numbers as fractions (for example, 0.71 = 71/100).</li> <li>● To recognise and use thousandths and relate them to tenths, hundredths and decimals equivalents.</li> <li>● To round decimals with two decimal places to the nearest whole numbers and to one decimal place.</li> </ul>
U & A	Unit 10	Problems involving percentages	<ul style="list-style-type: none"> <li>● To 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 hundred, and as a decimal fraction.</li> <li>● To solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 4/5 and those with a denominator of a multiple of 10 or 25.</li> </ul>
U & A	Unit 11	Perimeter, area and scale drawing	<ul style="list-style-type: none"> <li>● To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</li> <li>● To calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes.</li> <li>● To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.</li> </ul>
U & A	Unit 12	Statistics: Timetables	<ul style="list-style-type: none"> <li>● To complete, read and interpret information in tables, including timetables.</li> </ul>