

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

Year 5

Spring Term

Mathematical aspect		Curriculum statement
U & A	Unit 1 Negative numbers, and solving problems involving numbers	<ul style="list-style-type: none"> <li>● To read, write, order and compare numbers at least to 1,000,000 and determine the value of each digit.</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 and money	<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 Long multiplication, square numbers and cube numbers	<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 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).</li> <li>● To solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.</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> </ul>
U & A	Unit 4 Adding and subtracting fractions	<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 5 Geometry: Reflections and translations	<ul style="list-style-type: none"> <li>● To 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>

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U & A	Unit 6	Measurement: mass	<ul style="list-style-type: none"> <li>● To convert between different units of measure (kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre).</li> <li>● To understand and use basic equivalences between metric units and common imperial units such as inches, pounds and pints.</li> <li>● To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.</li> </ul>
U & A	Unit 7	Addition and subtraction: mental and written methods for 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> </ul>
U & A	Unit 8	Multiplication and division: written methods	<ul style="list-style-type: none"> <li>● To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.</li> <li>● To multiply numbers up to 4 digits by a one- or two-digit number using an 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 9	Calculating with fractions	<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> <li>● To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</li> </ul>
U & A	Unit 10	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> </ul>
U & A	Unit 11	Measurement: capacity	<ul style="list-style-type: none"> <li>● To convert between different units of measure (kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre).</li> <li>● To understand and use basic equivalences between metric units and common imperial units such as inches, pounds and pints.</li> <li>● To estimate volume and capacity</li> <li>● To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling</li> </ul>
U & A	Unit 12	Statistics: Line graphs/ comparative graphs	<ul style="list-style-type: none"> <li>● To solve comparison, sum and difference problems using information presented in a line graph.</li> </ul>