



**Maths medium term plan KS2 (Y5/6)**  
**Autumn term 2017**

Teaching focus	Learning intentions		
	SEN	Y5	Y6
<b>Number: Place Value</b>	<p>Find 1000 more or less than a given number. Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones) Order and compare numbers beyond 1000 Identify, represent and estimate numbers using different representations. Round any number to the nearest 10, 100 or 1000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers. Count backwards through zero to include negative numbers. 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.</p>	<p>Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 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.</p>	<p>Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. Round any whole number to a required degree of accuracy. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve all of the above.</p>
<b>Number: Addition and subtraction</b>	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.</p>	<p>Add and subtract numbers mentally with increasingly large numbers. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 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.</p>	<p>Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.</p>
<b>Statistics</b>	<p>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.</p>	<p>Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables.</p>	<p>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 the mean as an average.</p>

<p style="text-align: center;"><b>Number: multiplication and division</b></p>	<p>Number – Multiplication and Division Recall and use multiplication and division facts for multiplication tables up to <math>12 \times 12</math>. <b>Count in multiples of 6, 7, 9, 25 and 1000</b> 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. <b>Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit</b>, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.</p>	<p>Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers by 10, 100 and 1000. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. 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. Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Establish whether a number up to 100 is prime and recall prime</p>	<p>Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. Divide numbers up to 4 digits by a 2-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. Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context. Perform mental calculations, including with mixed operations and large numbers. Identify common factors, common multiples and prime numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve problems involving addition, subtraction, multiplication and division. Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.</p>
<p style="text-align: center;"><b>Perimeter area and volume</b></p>	<p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Convert between different units of measure [for example, kilometre to metre]</p>	<p>Measure and calculate the perimeter of composite rectilinear shapes in cm and m. Calculate and compare the area of rectangles (including squares), and including using standard units, <math>\text{cm}^2</math>, <math>\text{m}^2</math> estimate the area of irregular shapes.</p>	<p>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 <math>\text{cm}^3</math>, <math>\text{m}^3</math> and extending to other units (<math>\text{mm}^3</math>, <math>\text{km}^3</math>)</p>