

Year 5 - Autumn	Year 5 -Spring	Year 5 - Summer
Expected Standard		
Number: Place Value	Number: Multiplication and Division	Measures: Decimals
<ul style="list-style-type: none"> <li>Read numbers to at least 1000000 and determine the value of each digit.</li> <li>Write numbers to at least 1000000 and determine the value of each digit.</li> <li>Order numbers to at least 1000000 and determine the value of each digit.</li> <li>Compare numbers to at least 1000000 and determine the value of each digit.</li> <li>Count forwards in steps of powers of 10 for any given number up to 1000000.</li> <li>Count backwards in steps of powers of 10 for any given number up to 1000000.</li> <li>Interpret negative numbers in context, count forwards with positive and negative whole numbers including through zero.</li> <li>Interpret negative numbers in context, count backwards with positive and negative whole numbers including through zero.</li> <li>Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000.</li> <li>Solve number problems that involve all of the above.</li> <li>Solve practical problems that involve all of the above.</li> <li>Read Roman numerals to 1000 (M).</li> <li>Recognise years written in Roman numerals.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply numbers mentally drawing upon known facts.</li> <li>Divide numbers mentally drawing upon known facts.</li> <li>Multiply numbers up to 4 digits by a one digit number using a formal written method, including long multiplication for 2 digit numbers.</li> <li>Multiply numbers up to 4 digits by a two digit number using a formal written method, including long multiplication for 2 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> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving number up to three decimal places.</li> <li>Multiply whole numbers and those involving decimals by 10.</li> <li>Multiply whole numbers and those involving decimals by 100.</li> <li>Multiply whole numbers and those involving decimals by 1000.</li> <li>Divide whole numbers and those involving decimals by 10.</li> <li>Divide whole numbers and those involving decimals by 100.</li> <li>Divide whole numbers and those involving decimals by 1000.</li> </ul>
Number: Addition and Subtraction	Number: Fractions	Geometry: Properties of Shapes
<ul style="list-style-type: none"> <li>Add numbers mentally with increasingly large numbers.</li> <li>Subtract numbers mentally with increasingly large numbers.</li> <li>Add whole numbers with more than 4 digits, including using formal written methods (columnar addition).</li> <li>Subtract whole numbers with more than 4 digits, including using formal written methods (columnar subtraction).</li> <li>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li> <li>Solve addition multi-step problems in contexts, deciding which operations and methods to use.</li> <li>Solve addition multi-step problems in contexts, deciding why to use a certain operation.</li> <li>Solve subtraction multi-step problems in contexts, deciding which operations and methods to use.</li> <li>Solve subtraction multi-step problems in contexts, deciding why to use a certain operation.</li> </ul>	<ul style="list-style-type: none"> <li>Compare fractions whose denominators are multiples of the same number.</li> <li>Order fractions whose denominators are multiples of the same number.</li> <li>Identify equivalent fractions of a given fraction, represented visually including tenths and hundredths.</li> <li>Name equivalent fractions of a given fraction, represented visually including tenths and hundredths.</li> <li>Write equivalent fractions of a given fraction, represented visually including tenths and hundredths.</li> <li>Recognise mixed numbers.</li> <li>Recognise improper fractions.</li> <li>Convert mixed numbers and improper fractions 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 fractions with the same denominator and denominators that are multiples of the same number.</li> <li>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.</li> <li>Multiply proper fractions and mixed numbers by whole numbers, supported by diagrams.</li> <li>Read and write decimal numbers as fractions [ for example <math>0.71 = 71/100</math> ].</li> <li>Solve problems involving multiplication including scaling by simple fractions and problems involving simple rates.</li> <li>Solve problems involving division, including scaling by simple fractions and problems involving simple rates.</li> </ul>	<ul style="list-style-type: none"> <li>Identify 3D shapes, including cubes and other cuboids, from 2D representations.</li> <li>Use the properties of rectangles to deduce related facts.</li> <li>Use the properties of rectangles to find missing lengths and angles.</li> <li>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> <li>Know angles are measured in degrees: <ul style="list-style-type: none"> <li>Estimate and compare acute angles.</li> <li>Estimate and compare obtuse angles.</li> <li>Estimate and compare reflex angles.</li> </ul> </li> <li>Draw given angles, and measure them in degrees (o).</li> <li>Measure any given angles in degrees (o).</li> <li>Identify: angles at a point and one whole turn (total 360o).</li> <li>Identify: angles at a point on a straight line.</li> <li>Identify: angles at a <math>\frac{1}{2}</math> a turn (total 180o).</li> <li>Identify: angles at other multiples of 90o.</li> </ul>

Statistics	Number: Decimals and Percentages	Geometry: Position and Direction
<ul style="list-style-type: none"> <li>Solve comparison problems using information presented in a line graph.</li> <li>Solve sum problems using information presented in a line graph.</li> <li>Solve difference problems using information presented in a line graph.</li> <li>Complete information in tables including timetables.</li> <li>Read information in tables including timetables.</li> <li>Interpret information in tables including timetables.</li> </ul>	<ul style="list-style-type: none"> <li>Read numbers with up to three decimal places.</li> <li>Write numbers with up to three decimal places.</li> <li>Order numbers with up to three decimal places.</li> <li>Compare numbers with up to three decimal places.</li> <li>Recognise thousandths and relate them to tenths, hundredths and decimal equivalents.</li> <li>Use thousandths and relate them to tenths, hundredths and decimal equivalents.</li> <li>Round decimals with two decimal places to the nearest whole number.</li> <li>Round decimals with two decimal places to one decimal place.</li> <li>Solve problems involving number up to three decimal places.</li> <li>Recognise the per cent symbol (%).</li> <li>Understand that per cent relates to 'number of parts per hundred'.</li> <li>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> and those fractions with a denominator of a multiple of 10 or 25.</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{4}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{2}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the position of a shape following a reflection or translation, using the appropriate language.</li> <li>Describe the position of a shape following a reflection or translation, using the appropriate language.</li> <li>Represent the position of a shape following a reflection or translation, using the appropriate language.</li> <li>To know that the shape has not changed.</li> </ul>
Number: Multiplication and Division		Measures: Converting Units
<ul style="list-style-type: none"> <li>Multiply numbers mentally drawing upon known facts.</li> <li>Divide numbers mentally drawing upon known facts.</li> <li>Multiply whole numbers by 10.</li> <li>Multiply whole numbers by 100.</li> <li>Multiply whole numbers by 1000.</li> <li>Divide whole numbers by 10.</li> <li>Divide whole numbers by 100.</li> <li>Divide whole numbers by 1000.</li> <li>Identify multiples and factors, including finding all factor pairs of a number.</li> <li>Identify multiples and factors, and common factors of two numbers.</li> <li>Recognise square numbers and the notation for squared (2).</li> <li>Recognise cube numbers and the notation for cubed (3).</li> <li>Use square numbers and the notation for squared (2).</li> <li>Use cube numbers and the notation for cubed (3).</li> <li>Solve problems involving multiplication including using their knowledge of factors and multiples, squares and cubes.</li> <li>Solve problems involving division including using their knowledge of factors and multiples, squares and cubes.</li> <li>Know the vocabulary of prime numbers.</li> </ul>		<ul style="list-style-type: none"> <li>Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml].</li> <li>Solve problems involving converting between units of time.</li> </ul>

<ul style="list-style-type: none"> <li>• Know the vocabulary of prime factors.</li> <li>• Know the vocabulary of composite (non-prime) numbers.</li> <li>• Use the vocabulary of prime numbers.</li> <li>• Use the vocabulary of prime factors.</li> <li>• Use the vocabulary of composite (non-prime) numbers.</li> </ul> <ul style="list-style-type: none"> <li>• Establish whether a number up to 100 is prime.</li> <li>• Recall prime numbers up to 19.</li> </ul>		
<b>Measures: Perimeter and Area</b>		<b>Measures: Volume</b>
<ul style="list-style-type: none"> <li>• Measure and calculate the perimeter of composite rectilinear shapes in cm and m.</li> <li>• Calculate the area of rectangles (including squares), and including using standard units, cm<sup>2</sup>, m<sup>2</sup></li> <li>• Compare the area of rectangles (including squares), and including using standard units, cm<sup>2</sup>, m<sup>2</sup></li> <li>• Estimate the area of irregular shapes.</li> </ul>		<ul style="list-style-type: none"> <li>• Estimate volume [for example using 1cm<sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]</li> </ul>