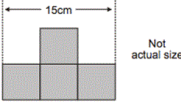


## Year 5 Yearly Overview for maths.



	<u>Autumn</u>	<u>Spring</u>	<u>Summer</u>
Number / P.V	<p>To read, write, order and compare numbers at least to 1,000,000 and determine the value of each digit.</p> <p>To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. Building up 1,000,000 throughout the year</p> <p>Solve number problems that involve all objectives in year 5  <b>Find the missing number in <math>17.82 - \square = 17.22</math></b></p>	<p>Negative numbers, and solving problems involving numbers</p> <p>To read, write, order and compare numbers at least to 1,000,000 and determine the value of each digit.</p> <p>To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.</p> <p>To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.</p> <p>To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.</p>	<p>To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000.</p> <p>To interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.</p> <p>To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000. And decimals to nearest whole</p> <p>To solve number problems and practical problems that involve all of the above.</p> <p>To read numerals to 1000 (M) and recognise years written in Roman numerals.</p>
+ / -	<p>To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction). See Calculation policy</p> <p>To add and subtract numbers mentally with increasingly large numbers.</p> <p>To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p>	<p><b>To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</b></p> <p><b>To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling</b></p> <p>To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction).</p> <p>To add and subtract numbers mentally with increasingly large numbers  <b>Derive quickly related facts,</b>  <b>e.g. <math>80 + 50 = 130</math>, <math>130 - 50 = 80</math>, <math>800 + 500 = 1300</math>, <math>1300 - 800 = 500</math></b></p> <p>To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p>To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p>	<p><b>To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling</b></p> <p>To add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction).</p> <p>To add and subtract numbers mentally with increasingly large numbers.</p> <p>To solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. <b>e.g. calculating total cost of a holiday for a family, given prices for adults and children and surcharges for particular resorts.</b></p> <p>To use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p> <p>To solve problems involving numbers up to three decimal places.</p>
X / ÷	<p><b>To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</b></p> <p><b>To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.</b></p> <p>To solve problems involving multiplication and division where larger numbers are used by decomposing them into factors.</p> <p>To know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</p> <p>To establish whether a number up to 100 is prime and recall prime numbers up to 19.</p> <p>To multiply and divide numbers mentally drawing upon known facts.</p> <p>To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.</p>	<p>To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.</p> <p><b>To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.</b></p> <p><b>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.</b></p> <p><b>To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</b></p> <p>To recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).</p>	<p><b>To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling</b></p> <p><b>To solve problems involving converting between units of time.</b></p> <p>Multiplication and division with remainders            Use calculation policy – to refer to the different stages            To multiply numbers up to 4 digits by a one- or two-digit number using an efficient written method, including long multiplication for two-digit numbers.</p> <p>To divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context.</p> <p>To solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</p>

Fractions, decimals and percentages.	<p>To read, write, order and compare numbers with up to three decimal places.</p> <p>To read and write decimal numbers as fractions (for example, <math>0.71 = \frac{71}{100}</math>).</p> <p>To round decimals with two decimal places to the nearest whole numbers and to one decimal place.</p> <p>To recognise and use thousandths and relate them to tenths, hundredths and decimals equivalents. <b>Link with measure</b></p> <p>To solve problems involving number up to three decimal places.</p> <p>To compare and order fractions whose denominators are all multiples of the same number.</p> <p>To identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</p>	<p>To solve problems involving numbers up to three decimal places. <b>Link with addition and subtraction</b></p> <p>Adding and subtracting fractions 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>\frac{2}{5} + \frac{4}{5} = \frac{6}{5}</math></p> <p>To add and subtract fractions with the same denominator and multiples of the same number.</p> <p>To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</p> <p>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.</p>	<p>To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. <b>What is <math>\frac{3}{10}</math> of: 50, 20, 100...?</b></p> <p>Continue adding and subtracting fractions</p> <p>To round decimals with two decimal places to the nearest whole numbers and to one decimal place.</p> <p>To recognise and use thousandths and relate them to tenths, hundredth and decimal equivalents – <b>link with Measure</b></p> <p>To solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</p> <p><b>Which is a better mark in a test: 61% , or 30 out of 50? How do you know?</b></p>
Measure	<p>To convert between different units of measure (for example, kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre).</p> <p>To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.</p>	<p>To measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. Context addition and subtraction</p> <p><b>This shape is made from 4 shaded squares.</b></p>  <p><b>Calculate the perimeter of the shape</b></p> <p>To convert between different units of measure (for example, kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre).</p>	<p>To use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.</p> <p>To estimate volume (e.g. using <math>1 \text{ cm}^3</math> blocks to build cubes and cuboids) and capacity (e.g. using water).</p> <p>To understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</p>
Time		Solve problems involving converting between units of time	Solve problems involving converting between units of time
Money		To use all four operations to solve problems involving measure (e.g. money) using decimal notation including scaling.	To use all four operations to solve problems involving measure (e.g. money) using decimal notation including scaling
Geometry	<p>To use the properties of rectangles to deduce related facts and find missing lengths and angles.</p> <p>To identify 3D shapes including cubes and cuboids from 2D representations.</p>	<p>To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles</p> <p>To draw given angles, and measure them in degrees (<math>^{\circ}</math>).</p> <p>To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p> <p>To identify: angles at a point and one whole turn (total <math>360^{\circ}</math>) angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total <math>180^{\circ}</math>) other multiples of <math>90^{\circ}</math>.</p> <p>To calculate and compare the area of squares and rectangles including using standard units, square centimetres (<math>\text{cm}^2</math>) and square metres (<math>\text{m}^2</math>) and estimate the area of irregular shapes</p>	<p>To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles</p> <p>To draw given angles, and measure them in degrees (<math>^{\circ}</math>).</p> <p>To identify:</p> <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>\frac{1}{2}</math> a turn (total <math>180^{\circ}</math>)</li> <li>other multiples of <math>90^{\circ}</math>.</li> </ul> <p>To use the properties of a rectangle to deduce related facts and find missing lengths and angles.</p>
Position		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.	
Statistics	To complete, read and interpret information in tables, including timetables.	To solve comparison, sum and difference problems using information presented in a line graph.	