

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and Place Value	<ul style="list-style-type: none"> <li>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to 100 in numerals.</li> <li>Count in multiples of twos, fives and tens.</li> <li>Given a number, identify one more and one less.</li> <li>Identify and represent numbers using objects and pictorial representations inc the number line, and use the language of: equal to, more than, less than (fewer), most, least.</li> <li>Read and write numbers from 1 to 20 in numerals and words.</li> </ul>	<ul style="list-style-type: none"> <li>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward.</li> <li>Recognise the place value of each digit in a two-digit number (tens, ones).</li> <li>Identify, represent and estimate numbers using different representations, inc. the number line.</li> <li>Compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs.</li> <li>Read and write numbers to at least 100 in numerals and in words.</li> </ul>	<ul style="list-style-type: none"> <li>Count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number.</li> <li>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).</li> <li>Compare and order nos up to 1000. Read and write nos up to 1000 in numerals and in words.</li> <li>Identify, represent and estimate numbers using different representations.</li> <li>Solve number problems and practical problems involving these ideas.</li> </ul>	<ul style="list-style-type: none"> <li>Count in multiples of 6, 7, 9, 25 and 1000.</li> <li>Find 1000 more or less than a given number. Round any number to the nearest 10, 100 or 1000.</li> <li>Count backwards through zero to include negative numbers.</li> <li>Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens, and ones). Order and compare numbers beyond 1000.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Read, write, order &amp; compare numbers to at least 1 000 000 and determine the value of each digit.</li> <li>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000</li> <li>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.</li> <li>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>	<ul style="list-style-type: none"> <li>Read, write, order &amp; compare numbers up to 10 000 000 and determine the value of each digit. Round any whole number to a required degree of accuracy.</li> <li>Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve all of the above.</li> </ul>
Number - Addition and Subtraction	<ul style="list-style-type: none"> <li>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.</li> <li>Represent and use number bonds and related subtraction facts within 20.</li> <li>Add and subtract one-digit and two-digit numbers to 20, including zero.</li> <li>Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as <math>7 = ? - 9</math>.</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems with addition and subtraction: using concrete objects and pictorial representations; applying their increasing knowledge of mental and written methods.</li> <li>Recall and use add and subtract facts to 20 fluently, and derive and use related facts up to 100.</li> <li>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a 2-digit no and 1s or 10s; two 2-digit numbers; adding three 1-digit numbers.</li> <li>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.</li> <li>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract numbers mentally, including: a 3-digit no and 1s, 10s, 100s.</li> <li>Add and sub numbers with up to 3 digits, using formal written methods of columnar add and sub.</li> <li>Estimate the answer to a calculation and use inverse operations to check answers.</li> <li>Solve problems, including missing no problems, using number facts, place value, and more complex add/sub.</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.</li> <li>Estimate and use inverse operations to check answers to a calculation.</li> <li>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).</li> <li>Add and subtract numbers mentally with increasingly large numbers. Use rounding to check answers to calculations and levels of accuracy.</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>	<ul style="list-style-type: none"> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>
Number - Multiplication and Division	<ul style="list-style-type: none"> <li>Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial reps and arrays with the support of the teacher.</li> <li>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (<math>\times</math>), division (<math>\div</math>) and equals (=) signs.</li> <li>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.</li> <li>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.</li> <li>Write and calc math statements for <math>\times</math> and <math>\div</math> using the tables they know, including 2-digit numbers times 1-digit numbers, using mental and formal written methods.</li> <li>Solve problems and missing number problems, involving <math>\times</math> and <math>\div</math>, including integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects.</li> </ul>	<ul style="list-style-type: none"> <li>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</li> <li>Recognise and use factor pairs and commutativity in mental calculations.</li> <li>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.</li> <li>Solve problems involving <math>\times</math> and <math>\div</math>, including using the distributive law to multiply 2 digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as <math>n</math> objects are connected to <math>m</math> objects.</li> </ul>	<ul style="list-style-type: none"> <li>Recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math>.</li> <li>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 numbers up to 19.</li> <li>Multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method. Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division.</li> <li>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.</li> <li>Recognise and use square numbers and cube numbers, and the notation for squared and cubed.</li> </ul>	<ul style="list-style-type: none"> <li>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</li> <li>Identify common factors, common multiples and prime numbers.</li> <li>Use their knowledge of the order of operations to carry out calculations involving the four operations.</li> </ul>	<ul style="list-style-type: none"> <li>Multiply and divide numbers up to 4 digits by a 2-digit whole number using the formal written methods and interpret remainders as whole number remainders, fractions, or by rounding.</li> </ul>

Number - Fractions	<ul style="list-style-type: none"> <li>Recognise, find and name a half as one of two equal parts of an object, shape or quantity.</li> <li>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise/ find/ name/ write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math>, <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity.</li> <li>Write simple fractions e.g. <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of <math>\frac{2}{4}</math> and <math>\frac{1}{2}</math>.</li> </ul>	<ul style="list-style-type: none"> <li>Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.</li> <li>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</li> <li>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</li> <li>Recognise and show, using diagrams, equivalent fractions with small denominators.</li> <li>Add and sub fractions with the same denominator within one whole (e.g. <math>\frac{5}{7} + \frac{1}{7} = \frac{6}{7}</math>).</li> <li>Compare and order unit fractions, and fractions with the same denominators.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise and show, using diagrams, families of common equivalent fractions.</li> <li>Count up and down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten.</li> <li>Add and subtract fractions with the same denominator.</li> <li>Recognise and write decimal equivalents of any number of tenths or hundredths; and the decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math> and three quarters.</li> <li>Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths.</li> <li>18. Round decimals with one decimal place to the nearest whole number. Solve simple measure and money problems involving fractions and decimals to 2 decimal places.</li> </ul>	<ul style="list-style-type: none"> <li>Compare and order fractions whose denominators are all multiples of the same number. Add and subtract fractions with the same denominator and multiples of the same number.</li> <li>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</li> <li>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math> as a mixed number.</li> <li>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.</li> <li>Round decimals with two decimal places to the nearest whole number and to one decimal place. Read and write decimal numbers as fractions (e.g. <math>0.72 = \frac{72}{100}</math>).</li> <li>Read, write, order and compare numbers with up to three decimal places. Solve problems involving number up to three decimal places.</li> <li>Write percentages as a fraction. 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> and those with a denominator of a multiple of 10 or 25.</li> </ul>	<ul style="list-style-type: none"> <li>Use common factors to simplify fractions; use common multiples to express fractions in the same denominator.</li> <li>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.</li> <li>Multiply simple proper fractions and simplify the answer (e.g. <math>\frac{4}{5} \times \frac{72}{78} = \frac{78}{78}</math>). Divide proper fractions by whole numbers (e.g. <math>\frac{7}{2} \div 2 = ?</math>).</li> <li>Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places.</li> <li>Multiply one-digit numbers with up to two decimal places by whole numbers. Use written division methods in cases where the answer has up to two decimal places.</li> <li>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li> </ul>
Measurement	<ul style="list-style-type: none"> <li>Compare, describe &amp; solve practical problems for: lengths/heights (short/tall, half/ double); mass/weight (heavier/lighter); capacity/volume (full/empty, more/less); time (quicker/slower/later)</li> <li>Measure and begin to record the following: lengths/heights; mass/weight; capacity/volume; time (hours, minutes, seconds).</li> <li>Recognise and know the value of different denominations of coins and notes.</li> <li>Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening.</li> <li>Recognise and use language relating to dates, including days of the week, weeks, months and years.</li> <li>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.</li> </ul>	<ul style="list-style-type: none"> <li>Choose/use appropriate stand units to estimate/measure length/height (m/cm); mass (kg/g); temp (<math>^{\circ}</math>C); cap (litres/ml) to nearest unit, using rulers, scales, thermometers and measuring vessels.</li> <li>Compare and order lengths, mass, volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math>.</li> <li>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money.</li> <li>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.</li> <li>Compare and sequence intervals of time. Know the number of minutes in an hour and the number of hours in a day.</li> <li>Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.</li> </ul>	<ul style="list-style-type: none"> <li>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).</li> <li>Measure the perimeter of simple 2-D shapes.</li> <li>Add and subtract amounts of money to give change, using both £ and p in practical contexts.</li> <li>Tell/write the time from an analogue clock, inc Roman numerals from I to XII, and 12-hr/24-hr clocks.</li> <li>Estimate and read time with increasing accuracy to nearest min; record/compare time in seconds, minutes, hours. Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.</li> <li>Know the number of seconds in a minute and the number of days in each month, year and leap year.</li> </ul>	<ul style="list-style-type: none"> <li>Convert between different units of measure (e.g. kilometre to metre). Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days).</li> <li>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Find the area of rectilinear shapes by counting squares.</li> <li>Estimate, compare and calculate different measures, including money in pounds and pence.</li> <li>Read, write and convert time between analogue and digital 12 and 24-hour clocks.</li> </ul>	<ul style="list-style-type: none"> <li>Convert between different units of metric measure (e.g. km &amp; m; cm &amp; m; cm &amp; mm; g &amp; kg; l &amp; ml). Use approx. equivalences between metric and imperial units (e.g. inches, pounds &amp; pints).</li> <li>Measure &amp; calculate the perimeter of composite rectilinear shapes in cm/m. Calculate the area of squares/rectangles using standard units, square cm/m and estimate the area of irregular shapes.</li> <li>Estimate volume (e.g. using 1 cm blocks to build cubes/cuboids) and capacity (e.g. using water).</li> <li>Solve problems involving converting between units of time. Use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. Convert between miles and km.</li> <li>Use, read, write &amp; convert between standard units of measure, converting length, mass, volume &amp; time from smaller to larger units, and vice versa, using decimal notation to up to 3 dec places.</li> <li>Recognise that shapes with the same areas can have different perimeters and vice versa.</li> <li>Calculate the area of parallelograms and triangles. Recognise when it is possible to use formulae for area and volume of shapes.</li> <li>Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm<sup>2</sup>) and cubic metres (m<sup>3</sup>), and extending to other units.</li> </ul>
Geometry	<ul style="list-style-type: none"> <li>Recognise and name common 2-D shapes (e.g. rectangles, circles and triangles) and 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres).</li> <li>Describe position, directions and movements, including whole, half, quarter and three-quarter turns.</li> </ul>	<ul style="list-style-type: none"> <li>Identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line.</li> <li>Identify and describe the properties of 3D shapes, including the no. of edges, vertices and faces.</li> <li>Identify 2D shapes on the surface of 3D shapes, e.g. circle on a cylinder; a triangle on a pyramid.</li> <li>Compare and sort common 2D and 3D shapes and everyday objects.</li> <li>Order and arrange combinations of mathematical objects in patterns and sequences.</li> <li>Use math vocabulary to describe position, direction &amp; movement including movement in a straight line and distinguishing rotation as a turn &amp; in terms of right</li> </ul>	<ul style="list-style-type: none"> <li>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.</li> <li>Recognise that angles are a property of shape or a description of a turn.</li> <li>Identify right angles, recognise that 2 right angles make a half-turn, 3 make three quarters of a turn and 4 a complete turn. Identify whether angles are greater than or less than a right angle.</li> <li>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</li> </ul>	<ul style="list-style-type: none"> <li>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</li> <li>Identify acute and obtuse angles and compare and order angles up to two right angles by size.</li> <li>Identify lines of symmetry in 2-D shapes presented in different orientations.</li> <li>Complete a simple symmetric figure with respect to a specific line of symmetry.</li> <li>Describe positions on a 2-D grid as coordinates in the first quadrant. Describe movements between positions as translations of a given unit to the left/right and up/down.</li> <li>Plot specified points and draw sides to complete a given polygon.</li> </ul>	<ul style="list-style-type: none"> <li>Identify 3D shapes, including cubes and other cuboids, from 2D representations.</li> <li>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees.</li> <li>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>.</li> <li>Use the properties of rectangles to deduce related facts and find missing lengths and angles.</li> <li>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>	<ul style="list-style-type: none"> <li>Draw 2-D shapes using given dimensions and angles. Recognise, describe and build simple 3-D shapes, including making nets.</li> <li>Describe positions on the full coordinate grid (all four quadrants).</li> <li>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.</li> <li>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</li> <li>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</li> </ul>

		angles for $1/4$ , $1/2$ , & $3/4$ turns (clock/anti-clockwise).					<ul style="list-style-type: none"><li>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li></ul>
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