

## National Curriculum 2014 ~ Statutory Programme of Study for Mathematics by Year Group

### Strand: Number and place value

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<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.</li> <li>• Count, read and write numbers to 100 in numerals; 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 &amp; pictorial representations including 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, including 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> <li>• Use place value and number facts to solve problems.</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 numbers up to 1000 .</li> <li>• Identify, represent and estimate numbers using different representations.</li> <li>• Read and write numbers up to 1000 in numerals and in words.</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.</li> <li>• Count backwards through zero to include negative numbers.</li> <li>• Recognise the place value of each digit in a four-digit number (THTU, HTU, TU, and U).</li> <li>• Order and compare numbers beyond 1000.</li> <li>• Identify, represent and estimate numbers using different representations.</li> <li>• Round any number to the nearest 10, 100 or 1000.</li> <li>• Solve number and practical problems that involve all of the above and with increasingly large positive numbers.</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 and 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 number up to 1 000 000.</li> <li>• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.</li> <li>• Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</li> <li>• Solve number problems and practical problems that involve all of the above.</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 and compare numbers up to 10 000 000 and determine the value of each digit.</li> <li>• Round any whole number to a required degree of accuracy.</li> <li>• Use negative numbers in context, and calculate intervals across zero.</li> <li>• Solve number and practical problems that involve all of the above.</li> </ul>

## National Curriculum 2014 ~ Statutory Programme of Study for Mathematics by Year Group

### Strand: Number - addition & subtraction

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>Addition &amp; subtraction</b></p> <ul style="list-style-type: none"> <li>• Pupils should be taught to: read, write &amp; interpret mathematical statements involving addition (+), subtraction (-) &amp; equals (=) signs</li> <li>• Represent and use number bonds and related subtraction facts within 20</li> <li>• Add and subtract one-digit &amp; two-digit numbers to 20, including zero.</li> <li>• Solve one-step problems that involve addition and subtraction, using concrete objects &amp; pictorial representations, and missing number problems such as <math>7 = [ ] - 9</math>.</li> </ul>	<p><b>Addition &amp; subtraction</b></p> <ul style="list-style-type: none"> <li>• Solve problems with addition &amp; subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods.</li> <li>• Recall and use addition and subtraction 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: <ul style="list-style-type: none"> <li><i>a two-digit number and ones</i></li> <li><i>a two-digit number and tens</i></li> <li><i>two two-digit numbers</i></li> <li><i>adding three one-digit numbers</i></li> </ul> </li> <li>• Show that addition of two numbers can be done in any order and subtraction of one number from another cannot.</li> <li>• Recognise and use the inverse relationship between addition &amp; subtraction and use this to check calculations and missing number problems.</li> </ul>	<p><b>Addition &amp; subtraction</b></p> <ul style="list-style-type: none"> <li>• Add and subtract numbers mentally, including: <ul style="list-style-type: none"> <li><i>a three-digit number and ones</i></li> <li><i>a three-digit number and tens</i></li> <li><i>a three-digit number and hundreds</i></li> </ul> </li> <li>• Add &amp; subtract numbers with up to three digits, using formal written methods of columnar + and -</li> <li>• Estimate answers to calculations; use inverses to check</li> <li>• Solve problems, including missing number problems, using number facts, place value &amp; more complex + &amp; - .</li> </ul>	<p><b>Addition &amp; subtraction</b></p> <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 + and - two-step problems in contexts, deciding which operations and methods to use &amp; why.</li> </ul>	<p><b>Addition &amp; subtraction</b></p> <ul style="list-style-type: none"> <li>• Add and subtract whole numbers with more than 4 digits, including using formal methods (columnar + &amp; -)</li> <li>• Add and subtract numbers mentally with increasingly large numbers.</li> <li>• Use rounding to check answers and determine, in the context of a problem, levels of accuracy.</li> <li>• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use &amp; why.</li> </ul>	<p><b>Addition, subtraction, multiplication &amp; division</b></p> <ul style="list-style-type: none"> <li>• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>• Divide numbers up to 4 digits by a two-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.</li> <li>• Divide numbers up to 4 digits by a two-digit whole number using the formal written method of short division where appropriate, interpreting remainders according to the context</li> <li>• Perform mental calculations, including with mixed operations and large 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> <li>• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>• Solve problems involving addition, subtraction, multiplication and division</li> <li>• Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</li> </ul>

## Strand: Number - multiplication & division

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>Multiplication &amp; division</b></p> <ul style="list-style-type: none"> <li>• Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations</li> </ul>	<p><b>Multiplication &amp; division</b></p> <ul style="list-style-type: none"> <li>• Recall &amp; use multiplication &amp; division facts for 2, 5 &amp; 10 tables, including recognising odd and even numbers</li> <li>• Calculate mathematical statements for multiplication and division within the multiplication tables; write them using multiplication (x), division (÷) &amp; 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>	<p><b>Multiplication &amp; division</b></p> <ul style="list-style-type: none"> <li>• Recall &amp; use <math>\times</math> and <math>\div</math> facts for the 3, 4 and 8 tables.</li> <li>• Write and calculate statements for <math>\times</math> and <math>\div</math> using tables they know, including for <math>TU \times U</math> using mental and progressing to formal written methods.</li> <li>• Solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects.</li> </ul>	<p><b>Multiplication &amp; division</b></p> <ul style="list-style-type: none"> <li>• Recall multiplication and division facts up to <math>12 \times 12</math>.</li> <li>• 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.</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 multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as <math>n</math> objects are connected to <math>m</math> objects.</li> </ul>	<p><b>Multiplication &amp; division</b></p> <ul style="list-style-type: none"> <li>• Identify multiples &amp; factors; find all factor pairs of a number &amp; common factors of 2 numbers.</li> <li>• Know &amp; use the vocabulary of prime numbers, prime factors &amp; composite numbers.</li> <li>• Establish whether a number up to 100 is prime; recall primes up to 19.</li> <li>• Multiply numbers up to 4 digits by a one or two-digit number using a formal method, including long multiplication for two-digit numbers.</li> <li>• multiply and divide numbers mentally drawing upon known facts</li> <li>• Divide numbers up to 4 digits by a one-digit number using the formal written method of short division; interpret remainders appropriately for the context</li> <li>• Multiply and divide whole numbers and those involving decimals by 10, 100 &amp; 1000.</li> <li>• Recognise and use square numbers &amp; cube numbers and notation for squared <sup>2</sup>, cubed <sup>3</sup></li> <li>• Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>• Solve problems involving <math>+</math> - <math>\times \div</math> and a combination of these, including understanding meaning of = sign</li> <li>• Solve problems involving <math>\times</math> and <math>\div</math> including scaling by simple fractions &amp; problems involving simple rates.</li> </ul>	<p><b>ALGEBRA</b></p> <ul style="list-style-type: none"> <li>• Use simple formulae</li> <li>• Generate and describe linear number sequences</li> <li>• Express missing number problems algebraically</li> <li>• Find pairs of numbers that satisfy number sentences involving two unknowns</li> <li>• Enumerate possibilities of combinations of two variables.</li> </ul> <p><b>RATIO AND PROPORTION</b></p> <ul style="list-style-type: none"> <li>• Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</li> <li>• Solve problems involving the calculation of percentages ( for example, of measures, and such as 15% of 360) and the use of percentages for comparison</li> <li>• Solve problems involving similar shapes where the scale factor is known or can be found</li> <li>• Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</li> </ul> <p><i>For Fractions see below...</i></p>

## Strand: Number - fractions

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>Fractions</b></p> <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>	<p><b>Fractions</b></p> <ul style="list-style-type: none"> <li>• Recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> &amp; <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>	<p><b>Fractions</b></p> <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 &amp; non-unit fractions with small denominators.</li> <li>• Recognise and show, using diagrams, equivalent fractions with small denominators.</li> <li>• Add and subtract 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> <li>• Solve problems that involve all of the above.</li> </ul>	<p><b>Fractions</b></p> <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>• Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.</li> <li>• Add and subtract fractions with the same denominator</li> <li>• Recognise and write decimal equivalents of any number of tenths or hundredths.</li> <li>• Recognise &amp; write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math></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>• Round decimals with one decimal place to the nearest whole number</li> <li>• Compare numbers with the same number of decimal places up to two decimal places</li> <li>• Solve simple measure and money problems involving fractions and decimals to two decimal places.</li> </ul>	<p><b>Fractions</b></p> <ul style="list-style-type: none"> <li>• Compare &amp; order fractions whose denominators are all multiples of the same number</li> <li>• Identify, name &amp; write equivalent fractions of a given fraction, represented visually, inc. <math>\frac{1}{10}</math> &amp; <math>\frac{1}{100}</math></li> <li>• Recognise mixed numbers &amp; improper fractions; convert from one form to the other; write mathematical statements <math>&gt; 1</math> as a mixed number [e.g. <math>\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}</math>]</li> <li>• Add &amp; subtract fractions with the same denominator &amp; multiples of the same number.</li> <li>• Multiply proper fractions &amp; mixed numbers by whole numbers, supported by materials &amp; diagrams.</li> <li>• Read and write decimal numbers as fractions [e.g. <math>0.71 = \frac{71}{100}</math>]</li> <li>• Recognise and use <math>\frac{1}{1000}</math> and relate them to <math>\frac{1}{10}</math>, <math>\frac{1}{100}</math> &amp; decimal equivalents.</li> <li>• Round decimals with two decimal places to the nearest whole number and to one decimal place.</li> <li>• Read, write, order and compare numbers with up to three decimal places</li> <li>• Solve problems with number to three decimal places.</li> <li>• Recognise the per cent symbol (%) and understand that per cent relates to 'the number of parts per 100' and write percentages as a fraction with denominator hundred; and as a decimal fraction</li> <li>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 with a denominator of a multiple of 10 or 25.</li> </ul>	<p><b>Fractions</b></p> <ul style="list-style-type: none"> <li>• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.</li> <li>• Compare &amp; order including fractions <math>&gt; 1</math></li> <li>• Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.</li> <li>• Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>]</li> <li>• Divide proper fractions by whole numbers [for example <math>\frac{1}{3} \div 2 = \frac{1}{6}</math>]</li> <li>• Associate a fraction with division and calculate decimal fraction equivalents [ for example 0.375 ] for a simple fraction [ for example <math>\frac{3}{8}</math> ]</li> <li>• Identify the value of each digit to three decimal places &amp; <math>\times</math> and <math>\div</math> numbers by 10, 100 and 1000 - with answers to 3 decimal places</li> <li>• Multiply one-digit numbers with up to two decimal places by whole numbers</li> <li>• Use written <math>\div</math> methods where the answer has up to 2 decimal places</li> <li>• Solve problems which require answers to be rounded to specified degrees of accuracy</li> <li>• Recall &amp; use equivalences between simple fractions, decimals &amp; percentages, including in different contexts.</li> </ul>

## National Curriculum 2014 ~ Statutory Programme of Study for Mathematics by Year Group

### Strand: Measurement

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> <li>• Compare, describe and solve practical problems for:                             <ul style="list-style-type: none"> <li>- lengths and heights [ e.g. long/short, longer/shorter, tall/short, double/half ]</li> <li>- mass or weight [ e.g. heavy/light, heavier than, lighter than ]</li> <li>- capacity/volume [ full/empty, more than, less than, half, half full, quarter ]</li> <li>- time [ e.g. quicker, slower, earlier, later ]</li> </ul> </li> <li>• Measure and begin to record the following: lengths and heights; mass/weight; capacity &amp; 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 and use appropriate standard units to estimate and measure:                             <ul style="list-style-type: none"> <li>- length/height in any direction (m/cm);</li> <li>- mass (kg/g);</li> <li>- temperature (°C);</li> <li>- capacity (litres/ml) to the nearest appropriate unit... <i>using rulers, scales, thermometers and measuring vessels</i></li> </ul> </li> <li>• Compare and order lengths, mass, volume / capacity and record the results using &gt;, &lt; and =</li> <li>• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.</li> <li>• 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.</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> <li>• Know the number of minutes in an hour and the number of hours in a day.</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 and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks</li> <li>• Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as 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> <li>• Compare durations of events, [for example to calculate the time taken by particular events or tasks.]</li> </ul>	<ul style="list-style-type: none"> <li>• Convert between different units of measure (e.g. kilometre to metre; hour to minute)</li> <li>• Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.</li> <li>• 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> <li>• Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</li> </ul>	<ul style="list-style-type: none"> <li>• Convert between different units of metric measure [ e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and milliliter ]</li> <li>• Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.</li> <li>• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</li> <li>• Calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (cm<sup>2</sup>) &amp; square metres (m<sup>2</sup>) and estimate the area of irregular shapes</li> <li>• Estimate volume [eg. using 1 cm<sup>3</sup> blocks to build cuboids including cubes] and capacity [e.g. using water]</li> <li>• Solve problems involving converting between units of time.</li> <li>• Use all four operations to solve problems involving measure [for example 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</li> <li>• Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places</li> <li>• Convert between miles and kilometres</li> <li>• Recognise that shapes with the same areas can have different perimeters and vice versa.</li> <li>• Recognise when it is possible to use formulae for area and volume of shapes.</li> <li>• Calculate the area of parallelograms and triangles.</li> <li>• Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units [for example mm<sup>3</sup> and km<sup>3</sup>. ]</li> </ul>

## National Curriculum 2014 ~ Statutory Programme of Study for Mathematics by Year Group

### Strand: Geometry

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>Geometry: Properties of shapes</b></p> <ul style="list-style-type: none"> <li>Recognise and name common 2-D and 3-D shapes, including: 2-D shapes (e.g. rectangles (including squares), circles and triangles) 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres).</li> </ul> <p><b>Position and direction</b></p> <ul style="list-style-type: none"> <li>Describe position, directions and movements, including half, quarter and three-quarter turns.</li> </ul>	<p><b>Geometry: Properties of shapes</b></p> <ul style="list-style-type: none"> <li>Identify &amp; describe the properties of 2-D shapes, including the number of sides &amp; line symmetry in a vertical line</li> <li>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> <li>Identify 2-D shapes on the surface of 3-D shapes, [e.g. a circle on a cylinder &amp; a triangle on a pyramid.]</li> <li>Compare and sort common 2-D and 3-D shapes and everyday objects.</li> </ul> <p><b>Position and direction</b></p> <ul style="list-style-type: none"> <li>Order and arrange combinations of mathematical objects in patterns and sequences.</li> <li>Use mathematical vocabulary to describe position, direction and movement including movement in a straight line, distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)</li> </ul>	<p><b>Geometry: Properties of shapes</b></p> <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 two right angles make a half-turn, three make three quarters of a turn and four 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>	<p><b>Geometry: Properties of shapes</b></p> <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> </ul> <p><b>Position and direction</b></p> <ul style="list-style-type: none"> <li>Describe positions on a 2-D grid as coordinates in the first quadrant</li> <li>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>	<p><b>Geometry: Properties of shapes</b></p> <ul style="list-style-type: none"> <li>Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.</li> <li>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.</li> <li>Draw given angles, and measure them in degrees (<math>^{\circ}</math>)</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>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> </ul> <p><b>Position and direction</b></p> <ul style="list-style-type: none"> <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>	<p><b>Geometry: Properties of shapes</b></p> <ul style="list-style-type: none"> <li>Draw 2-D shapes using given dimensions and angles</li> <li>Recognise, describe and build simple 3-D shapes, including making nets.</li> </ul> <p>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.</p> <ul style="list-style-type: none"> <li>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</li> <li>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li> </ul> <p><b>Position and direction</b></p> <ul style="list-style-type: none"> <li>Describe positions on the full coordinate grid (all four quadrants)</li> <li>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</li> </ul>

## National Curriculum 2014 ~ Statutory Programme of Study for Mathematics by Year Group

### Strand: STATISTICS

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"> <li>• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</li> <li>• Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>• Ask and answer questions about totaling and comparing categorical data.</li> </ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"> <li>• Interpret and present data using bar charts, pictograms and tables</li> <li>• Solve one and two step questions [For example: <i>“How many more?”</i>  and <i>“How many fewer?”</i>] ... using information presented in scaled bar charts and pictograms and tables.</li> </ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"> <li>• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs</li> <li>• Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</li> </ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"> <li>• Solve comparison, sum and difference problems using information presented in a line graph</li> <li>• Complete, read and interpret information in tables, including timetables.</li> </ul>	<p><b>Pupils should be taught to:</b></p> <ul style="list-style-type: none"> <li>• Interpret and construct pie charts and line graphs and use these to solve problems</li> <li>• Calculate and interpret the mean as an average.</li> </ul>

For further detail see the associated “Notes and guidance (non-statutory)” pages in the Draft National Curriculum Framework document