

Subject: Maths

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>
Year 1	<p><b>NCETM Number sense - for fluency</b></p> <p><b>Place value- Previous Reception experiences and Working with numbers 0- 20</b>  <i>Recognising number                      Recognising pattern                      Tens frame                      Concrete resources                      Identifying quantity and sets</i></p> <p><b>Measure</b>  <i>Measuring weight, length and height                      Vocabulary                      comparing</i></p>	<p><b>NCETM Number sense - for fluency</b></p> <p><b>Place value- Comparison of quantities and part-whole relationships</b>  <i>Bar model                      Numbers 0 to 5                      Numbers 6 to 10                      More and less than                      Partitioning                      Groups of</i></p> <p><b>Shape</b>  <i>Recognise, compose, decompose and manipulate 2D and 3D shapes</i></p>	<p><b>NCETM Number sense - for fluency</b></p> <p><b>Shape</b>  <i>Recognise, compose, decompose and manipulate 2D and 3D shapes</i></p> <p><b>Place value</b>  <i>Numbers 0 to 10                      More and less than                      Number line</i></p>	<p><b>NCETM Number sense - for fluency</b></p> <p><b>Addition- Additive structures</b>  <i>Aggregation and partitioning                      Augmentation and reduction                      Addition in different ways                      Bar model                      Part- whole model</i></p> <p><b>Addition and Subtraction</b>  <i>Addition and subtraction                      Odd and even                      Number bonds                      Addition in different ways                      Subtraction in different ways</i></p>	<p><b>NCETM Number sense - for fluency</b></p> <p><b>and subtraction facts within 10</b>  <i>Commutative                      More and less than                      Odd and even</i></p> <p><b>Numbers 20-100</b>  <i>Different strategies                      Number Line                      Doubling                      Halving                      Odd and even                      Number facts                      Multiples</i></p>	<p><b>NCETM Number sense - for fluency</b></p> <p><b>Unitising and coin recognition</b>  <i>Counting in 2's 5's and 10's                      Value                      Amount                      Total value</i></p> <p><b>Position and direction</b>  <i>Turns- quarter, half                      Describing position</i></p> <p><b>Time</b>  <i>Vocabulary                      Half past                      O'clock</i></p>
Year 2	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense - for fluency</b>	<b>NCETM Number sense project - for fluency</b>

	<p><b>Numbers 10 - 100</b></p> <ul style="list-style-type: none"> <li>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and 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> <p><b>Calculations within 20</b></p> <ul style="list-style-type: none"> <li>solve problems with addition and subtraction:</li> <li>using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li> </ul>	<p><b>Fluently add and subtract within 10</b></p> <p><b>Addition and subtraction of 2 digit numbers</b></p> <ul style="list-style-type: none"> <li>solve problems with addition and subtraction:</li> <li>using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li> <li>applying their increasing knowledge of mental and written methods</li> <li>add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>a two-digit number and ones and a two-digit number and tens;</li> <li>show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</li> </ul> </li> </ul>	<p><b>Introduction to multiplication and division structures</b></p> <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>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>	<p><b>Shape</b></p> <ul style="list-style-type: none"> <li>identifying and describing the properties of 2-D and 3-D shapes, including the number of edges, vertices and faces</li> <li>identifying 2-D shapes on the surface of 3-D shapes</li> <li>comparing and sorting common 2-D and 3-D shapes and everyday objects.</li> </ul> <p><b>Addition and subtraction of 2 digit numbers</b></p> <ul style="list-style-type: none"> <li>solve problems with addition and subtraction:</li> <li>using concrete objects and pictorial representations, including those involving numbers, quantities and measures</li> <li>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> </ul>	<p><b>Money</b></p> <ul style="list-style-type: none"> <li>recognise and use symbols for pounds (£) and pence (p);</li> <li>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> </ul> <p><b>Fractions</b></p> <ul style="list-style-type: none"> <li>Recognising finding, naming and writing fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity</li> <li>writing simple fractions e.g. <math>\frac{1}{2}</math> of 6 = 3 and recognising the equivalence of two quarters and one half.</li> </ul> <p><b>Time</b></p> <ul style="list-style-type: none"> <li>sequencing intervals of time</li> <li>Telling and writing the time to five minutes, including quarter past/to the</li> </ul>	<p><b>Doubling, halving, quotitive and partitive division</b></p> <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>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>
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	<ul style="list-style-type: none"> <li>● 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: a two-digit number and ones and two two-digit numbers</li> <li>● adding three one-digit numbers</li> </ul>	<ul style="list-style-type: none"> <li>● recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</li> </ul> <p><b>Introduction to multiplication</b></p> <ul style="list-style-type: none"> <li>● recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> <li>● calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (×) and equals (=) signs</li> <li>● show that multiplication of two numbers can be done in any order (commutative)</li> <li>● solve problems involving multiplication using materials, arrays, repeated addition, mental methods, and multiplication facts, including</li> </ul>		<ul style="list-style-type: none"> <li>● add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> <li>● a two-digit number and ones, a two-digit number and tens and two two-digit numbers</li> </ul> </li> <li>● adding three one-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 solve missing number problems</li> </ul>	<p>hour and drawing the hands on a clock face to show these times</p> <ul style="list-style-type: none"> <li>● knowing the number of minutes in an hour and the number of hours in a day.</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 and 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>Measure - capacity, volume, mass</b></p> <ul style="list-style-type: none"> <li>● choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</li> <li>● compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> </ul> <p><b>Statistics (and across other areas of the curriculum)</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</li> </ul>
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		problems in contexts.				sorting the categories by quantity • ask and answer questions about totalling and comparing categorical data.
Year 3	Number facts - recall and fluency Place Value - including reasoning Measure and statistics (in the context of place value)	Number facts - recall and fluency Place Value - including reasoning Addition and Subtraction - mental methods, reasoning	Number facts - recall and fluency Addition and Subtraction - written methods and efficiency, reasoning Measure (in the context of addition and subtraction) Multiplication and Division - written methods, reasoning	Number facts - recall and fluency - times tables Multiplication and Division - written methods, reasoning Measure (in the context of multiplication and division) Fractions, including reasoning	Number facts - recall and fluency - times tables Fractions, including reasoning Geometry	Number facts - recall and fluency - focus on times tables Time Recap of place value, written strategies, mental methods with a focus on reasoning
Year 4	<b>Review of column addition and subtraction</b> <ul style="list-style-type: none"> <li>Using place value to correctly lay out calculations</li> <li>Add 3 digit numbers</li> <li>Use column addition and subtraction</li> </ul>	<b>Perimeter/area</b> <ul style="list-style-type: none"> <li>Measuring the perimeter of a 2-D shape</li> <li>Count in measurements</li> <li>Using addition and multiplication to calculate</li> </ul>	<b>7 times tables and patterns</b> <ul style="list-style-type: none"> <li>Representing counting in 7s as the 7 times table</li> <li>Explaining relationships</li> <li>Solve problems</li> <li>Use knowledge of</li> </ul>	<b>Co-ordinates</b> <ul style="list-style-type: none"> <li>Giving directions from one position to another on a grid</li> <li>Moving objects on a grid</li> <li>Translate polygons</li> <li>Drawing polygons specified</li> </ul>	<b>Fractions greater than 1</b> <ul style="list-style-type: none"> <li>Quantities made up of both whole and fractional parts</li> <li>Compose and decomposing quantities made up of whole</li> </ul>	<b>Time</b> <ul style="list-style-type: none"> <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,</li> </ul>

	<p>with regrouping</p> <ul style="list-style-type: none"> <li>Using the inverse operation to check calculations</li> </ul> <p><b>Numbers to 10,000</b></p> <ul style="list-style-type: none"> <li>Recognising the amount of tens, hundreds and ones 1000 is composed of</li> <li>Using different strategies to add and subtract multiples of 100</li> <li>Rounding to the nearest 100 and 10</li> </ul>	<p>the perimeter</p> <ul style="list-style-type: none"> <li>Counting the inside of a shape to understand the area</li> </ul> <p><b>3, 6 and 9 times tables</b></p> <ul style="list-style-type: none"> <li>Recognising multiplication factors across the 3, 6 and 9 times tables</li> <li>Using knowledge of these times tables to solve problems</li> <li></li> </ul>	<p>divisibility to solve problems</p> <p><b>Understanding and manipulating multiplicative relationships</b></p> <ul style="list-style-type: none"> <li>What do factors represent in multiplication equations</li> <li>Multiplying and dividing by 0</li> <li>Partitioning factors</li> <li>Solving multiplication problems</li> </ul>	<p>by coordinates</p> <p><b>Review of fractions</b></p> <ul style="list-style-type: none"> <li>Identifying a whole and its parts</li> <li>Identifying the number of equal and unequal parts</li> <li>Constructing a whole when given a part and the number of parts</li> </ul>	<p>numbers and parts</p> <ul style="list-style-type: none"> <li>Comparing and ordering mixed numbers</li> <li>Solving subtraction and addition problems</li> <li>Mixed numbers and improper fractions</li> <li>Adding and subtracting mixed numbers</li> </ul> <p><b>Symmetry in 2D shapes</b></p> <ul style="list-style-type: none"> <li>Composing and completing symmetrical shapes</li> <li>Using a mirror to find lines of symmetry</li> <li>Reflecting polygons in a line of symmetry</li> </ul>	<p>minutes to seconds, years to months and weeks to days</p> <p><b>Division with remainders</b></p> <ul style="list-style-type: none"> <li>Representing remainders in an equation</li> <li>Use knowledge of division equations and remainders to solve problems</li> </ul>
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<p>Year 5</p>	<p><b><u>Decimals</u></b></p> <ul style="list-style-type: none"> <li>● Reading, writing, comparing, ordering with numbers with up to 3 decimal places.</li> <li>● Calculating decimal numbers using column addition and subtraction.</li> <li>● Problem solving in different contexts.</li> <li>● Convert between and compare metres and centimetre.</li> </ul> <p><b><u>Money</u></b></p> <ul style="list-style-type: none"> <li>● Add and subtract quantities of money.</li> <li>● Compare amounts of money.</li> <li>● Convert between pounds and pence.</li> <li>● Subtract and calculate the change due when paying in whole pounds or notes.</li> </ul>	<p><b><u>Negative numbers</u></b></p> <ul style="list-style-type: none"> <li>● Read and write negative numbers</li> <li>● Identify and place negative numbers on a number line</li> <li>● interpret sets of negative and positive numbers in a range of contexts</li> <li>● Use negative numbers on a coordinate grid and interpret graphs</li> </ul> <p><b><u>Short Multiplication and division</u></b></p> <ul style="list-style-type: none"> <li>● Multiply and divide a three-digit number by a single-digit number using short division with exchanging and remainders.</li> <li>● use efficient strategies of division to solve problems</li> </ul>	<p><b><u>Area and scaling</u></b></p> <ul style="list-style-type: none"> <li>● compare the area of different shapes</li> <li>● calculate the area of rectilinear shapes</li> <li>● knowledge of multiplication to solve comparison and change problems</li> <li>● use their knowledge of multiplication division to solve comparison and change problems</li> </ul>	<p><b><u>Calculating with decimal fractions</u></b></p> <ul style="list-style-type: none"> <li>● multiply and divide a number by 10, 100 and 1,000</li> <li>● convert between units of measure (length, mass and capacity)</li> <li>● use multiplying by 10 or 100 to multiply one-digit numbers by decimal fractions</li> <li>● multiplying by 10 or 100 to divide decimal fractions by one-digit</li> </ul> <p><b><u>Factors, multiples and primes</u></b></p> <ul style="list-style-type: none"> <li>● explain what a factor is and how to use arrays and multiplication/division facts to find them</li> <li>● use a complete list of factors to explain when a number is a square number</li> <li>● identify a prime number, composite number, common factor of a number, prime factor of a number, multiple or common multiple of a number</li> <li>● factor pairs of '100' to solve calculations efficiently</li> </ul>	<p><b><u>Fraction</u></b></p> <ul style="list-style-type: none"> <li>● multiply a proper and improper fraction by a whole number (greater than a whole)</li> <li>● multiply a mixed number by a whole number (product is greater than a whole)</li> <li>● find a fraction of a quantity and multiply a whole number by a unit fraction</li> <li>● non-unit fraction of a quantity using mental and written calculation</li> <li>● describe and compare two fractions</li> <li>● use their knowledge of the vertical and horizontal relationship to solve equivalent fractions problems</li> <li>● Equivalent fractions</li> </ul>	<p><b><u>Fractions</u></b></p> <ul style="list-style-type: none"> <li>● explain the relationship within families of equivalent fractions</li> <li>● Use equivalent fractions to solve problems</li> <li>● use common equivalents to compare fractions with decimals</li> </ul> <p><b><u>Converting units</u></b></p> <ul style="list-style-type: none"> <li>● convert from and to fraction and decimal fraction quantities of larger units</li> <li>● derive common conversions over 1</li> <li>● solve measures problems involving different units</li> <li>● understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints</li> <li>● convert between miles and kilometres</li> <li>● solve problems involving converting between units of time</li> </ul>
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Year 6	<p>Calculating using knowledge of structures</p> <p>Multiples of 1000s</p> <p>Numbers up to 10,000,000</p>	<p>Formal written methods (Four operations)</p> <p>Multiplication &amp; division</p>	<p>Division</p> <p>Fractions; equivalence and ordering, fractions of amounts</p> <p>shape - types of angles, measuring and drawing angles using a protractor</p>	<p>Fractions- four operations calculating</p> <p>Shape- properties of 2d and 3d shape, co-ordinates, translation, reflection</p> <p>Percentages of an amount</p>	<p>Shape- symmetry, scale drawings, radius, circumference</p> <p>Statistics</p> <p>Ratio and proportion</p> <p>Calculating using knowledge of structures</p> <p>Solving problems with 2 unknowns</p> <p>BIDMAS- Order of operations</p> <p>Mean average</p>	