## Progression of Knowledge, Skills and Understanding - Mathematics

|  | Year 1 | Year 2 |
| :---: | :---: | :---: |
| Place Value: Counting | Count to and across 100, forwards and backwards, beginning with 0 or 1 , from any given number. <br> Count numbers to 100 in numerals, count in multiples of twos, fives and tens | Count in steps of 2,3, and 5 from 0 , and in tens from any number, forward and backward |
| Place Value: Represent | Identify and represent numbers using objects and pictorial representations. <br> Read and write numbers to 100 in numerals <br> Read and write numbers from 1 to 20 in numerals and in words. | Read and write numbers to at least 100 in numerals and in words. Identify, represent and estimate numbers using different representations including the number line. |
| Place Value: Use Place Value and Compare | Given a number, identify one more and one less <br> Begin to use > < and = signs | Recognise the place value of each digit in a two-digit number (tens, ones) <br> Compare and order numbers from 0 up to 100 Use > < and = signs |
| Place Value: Problems and Rounding |  | Use Place value and number facts to solve problems |


|  | Year 1 | Year 2 |
| :---: | :---: | :---: |
| Addition \& Subtraction: <br> Recall, Represent, Use | Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. <br> Represent and use number bonds and related subtraction facts within 20 | Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100 <br> Show that addition of two numbers can be done in any order (Commutative) and subtraction of one number from another cannot. <br> Recognise and use the inverse relationship between addition and subtraction and use these to check calculations and solve missing number problems. |
| Addition and <br> Subtraction: <br> Calculations | Add and subtract one digit and two-digit numbers to 20 including zero | Add and subtract numbers using concrete objects, pictorial representations and mentally including: <br> - A two digit number and ones <br> - A two digit number and tens <br> - Two two digit numbers <br> - Adding three one digit numbers |
| Addition and <br> Subtraction: Solve <br> Problems | Solve one step problems that involve addition and subtraction using concrete objects and pictorial representations and missing number problems such as $7=$ ? - 9 | Solve problems with addition and subtraction; Use concrete objects and pictorial representations including those involving numbers quantities and measures to solve problems using addition and subtraction <br> Apply increasing knowledge of mental and written methods when solving problems with addition and subtraction |
| Multiplication \& Division: <br> Recall, Represent, Use | Count in $2 \mathrm{~s}, 5 \mathrm{~s}, 10 \mathrm{~s}$ | Recall and use multiplication and division facts for the 2,5 and 10 Multiplication tables, including recognising odd and even numbers. <br> Show that multiplication of two numbers can be done in any order (Commutative) and division of one number by another cannot. |


|  | Year 1 | Year 2 |
| :---: | :---: | :---: |
| Multiplication \& Division: <br> Calculations |  | Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( x ), division $(\div)$ and (=) signs |
| Multiplication \& Division: Solve Problems | Solve one step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher | Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts |
| Fractions: Recognise and Write | Recognise, find and name a half as one of two equal parts of an object, shape or quantity <br> Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | Recognise, find name and write fractions $1 / 3,1 / 4,2 / 4$, and $3 / 4$ of a length, shape, set of objects or quantity |
| Fractions: Compare |  | Recognise the equivalence of $2 / 4$ and $1 / 2$ |
| Fractions: Calculations |  | Write simple fractions eg. $1 / 2$ of $6=3$ |
| Measurement: Using Measures | Compare, describe and solve practical problems for: <br> Lengths and heights, Mass/weight, Capacity and volume, Time Measure and begin to record the following: <br> Lengths and heights, Mass/weight, Capacity and volume, Time (hours, minutes, seconds) | Choose and use appropriate standard units to estimate and measure length/height in any direction ( $\mathrm{m} / \mathrm{cm}$ ), mass ( $\mathrm{kg} / \mathrm{g}$ ), temperature ©, capacity (Litres $/ \mathrm{ml}$ ) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using > < and = |


|  | Year 1 | Year 2 |
| :--- | :--- | :--- |
| Measurement: Money | Recognise and know the different denominations of coins and <br> notes | Recognise and use symbols for pounds (f) and pence (p) <br> Combine amounts to make a particular value. <br> Find different combinations of coins that equal the same amounts <br> of money <br> Solve simple problems in a practical context involving addition and <br> subtraction of money of the same unit including giving change |
| Measurement: Time | Sequence events in chronological order and use language (e.g. <br> before and after, next, first, today, yesterday, tomorrow, morning, <br> afternoon, evening) <br> Recognise and use language relating to dates including days of the <br> week, weeks, months and years. <br> Tell the time to the hour and half past the hour and draw the <br> hands on a clock face to show these times | Compare and sequence intervals of time. <br> Tell and write the time to five minutes including quarter past/to <br> the hour and draw the hands on the clock face to show these <br> times. <br> Know the number of minutes in an hour and the number of hours <br> in the day. |
| Geometry: 2 D Shapes | Recognise and name common 2 D shapes (e.g., rectangles <br> (including squares), circles and triangles) | Identify and describe the properties of 2D shapes, including the <br> number of sides and line symmetry in a vertical line. <br> Identify 2D shapes on the surface of 3D shapes (e.g., a circle on a <br> cylinder and a triangle on a pyramid) <br> Compare and sort common 2D shapes and everyday objects. |
| Geometry: 3 D Shapes | Recognise and name common 3D shapes (e.g., cuboids (including <br> cubes), pyramids and spheres) | Recognise and name common 3D shapes (e.g., cuboids (including <br> cubes) pyramids and spheres) <br> Compare and sort common 3D shapes and everyday objects |


|  | Year 1 | Year 2 |
| :--- | :--- | :--- |
|  <br> Direction | Describe position, direction and movement, including whole, half, <br> quarter and three-quarter turns | Order and arrange combinations of mathematical objects in <br> patterns and sequences <br> Use mathematical vocabulary to describe position, direction and <br> movement, including movement in a straight line and <br> distinguishing between rotation as a turn and in terms of right <br> angles for quarter, half and three quarter, half and three quarter <br> turns |
| Statistics:: Present <br> and Interpret | Begin to interpret class block diagrams | Interpret and construct simple pictograms, tally charts, block <br> diagrams and simple tables. |
| Statistics:: Solve |  | Problems |
| Algebra | Solve one step problems that involve addition and subtraction, <br> using concrete objects and pictorial representations, and missing in each category and sorting the categories by quantity <br> number problems such as 7=?-9 <br> Ask and answer questions about totalling and comparing <br> categorical data |  |
| Recognise and use the inverse relationship between addition and <br> subtraction and use this to check calculations and solve missing <br> number problems |  |  |

