

#### Curriculum Progression Map - Maths - Number and Place Value

|   | Year 1   | Year 2   | Year 3  | Year 4   | Year 5  | Year 6  |
|---|--|--|---|--|---|---|
| Counting  | <ul> <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> </ul> | count in steps of 2, 3, and 5 from<br>0, and in tens from any number,<br>forward or backward                 | <ul> <li>count from 0 in multiples of 4, 8, 50 and 100;</li> <li>find 10 or 100 more or less than a given number</li> </ul> | <ul> <li>count backwards through zero to include negative numbers</li> <li>count in multiples of 6, 7, 9, 25 and 1000</li> <li>find 1000 more or less than a given number</li> </ul> | <ul> <li>interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero</li> <li>count forwards or backwards in steps of powers of 10 for any given number up to 1000 000</li> </ul>  | use negative numbers in context,<br>and calculate intervals across<br>zero  |
| Comparing Number                                | use the language of: equal to,<br>more than, less than (fewer),<br>most, least   | compare and order numbers from<br>0 up to 100; use <, > and = signs  | compare and order numbers up to 1000  | order and compare numbers<br>beyond 1000   | <ul> <li>read, write, order and compare numbers to at least 1000000 and determine the value of each digit</li> <li>(appears also in Reading and Writing Numbers)</li> </ul>   | <ul> <li>read, write, order and compare numbers up to</li> <li>10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)</li> </ul>        |
| Identifying /<br>Representing and<br>estimating | identify and represent numbers<br>using objects and pictorial<br>representations including the<br>number line  | identify, represent and estimate<br>numbers using different<br>representations, including the<br>number line | identify, represent and estimate<br>numbers using different<br>representations  | identify, represent and estimate<br>numbers using different<br>representations   | ,   |   |
| Reading and writing<br>number                   | read and write numbers from 1     to 20 in numerals and words.   | read and write numbers to at<br>least 100 in numerals and in<br>words  | read and write numbers up to 1 000 in numerals and in words   | 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.  | <ul> <li>read, write, order and compare numbers to at least 1000000 and determine the value of each digit</li> <li>(appears also in Comparing Numbers)</li> <li>read Roman numerals to 1000 (M) and recognise years written in Roman numerals.</li> </ul>   | <ul> <li>read, write, order and compare numbers up to</li> <li>10 000 000 and determine the value of each digit</li> <li>(appears also in Understanding Place Value)</li> </ul> |
| Understanding<br>place value                    |  | recognise the place value of each digit in a two-digit number (tens, ones)                                   | recognise the place value of each<br>digit in a three-digit number<br>(hundreds, tens, ones)                                | recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)   | <ul> <li>read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</li> <li>(appears also in Reading and Writing Numbers)</li> <li>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>(copied from Fractions)</li> </ul> | <ul> <li>read, write, order and compare numbers up to</li> <li>10 000 000 and determine the value of each digit (appears also in Reading and Writing Numbers)</li> </ul>        |
| Rounding  |  |  |   | round any number to the nearest<br>10,100 or 1000  | round any number up to 1000     000 to the nearest 10, 100, 1     000, 10 000 and 100 000   | round any whole number to a<br>required degree of accuracy  |
| Place Value<br>Problem solving                  | use place value and number facts     to solve problems   | solve number problems and practical problems involving these ideas.  | solve number and practical<br>problems that involve all of the<br>above and with increasingly large<br>positive numbers     | solve number problems and<br>practical problems that involve<br>all of the above   | solve number and practical<br>problems that involve all of the<br>above   |   |



#### Curriculum Progression Map - Maths - Addition and Subtraction

|   | Year 1  | Year 2  | Year 3 | Year 4   | Year 5   | Year 6   |
|---|---|---|--------|--|--|--|
| Number Bonds                                      | represent and use number<br>bonds and related subtraction<br>facts within 20  | <ul> <li>recall and use addition and<br/>subtraction facts to 20<br/>fluently, and derive and use<br/>related facts up to 100</li> </ul>  |        |  |  |  |
| Addition and<br>Subtraction<br>Mental calculation | add and subtract one-digit<br>and two-digit numbers to 20,<br>including zero  | <ul> <li>add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</li> <li>a two-digit number and ones</li> <li>a two-digit number and tens</li> <li>two two-digit numbers</li> <li>adding three one-digit numbers</li> </ul> | •      | <ul> <li>add and subtract numbers mentally, including:</li> <li>a three-digit number and ones</li> <li>a three-digit number and tens</li> <li>a three-digit number and hundreds</li> </ul> |  | add and subtract numbers<br>mentally with increasingly<br>large numbers  |
|   | <ul> <li>read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</li> <li>(appears also in Written Methods)</li> </ul>                   | show that addition of two<br>numbers can be done in any<br>order (commutative) and<br>subtraction of one number<br>from another cannot  |        |  |  |  |
| Addition and<br>Subtraction<br>Written methods    | <ul> <li>read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</li> <li>(appears also in Mental Calculation)</li> </ul>                | •   | •      | add and subtract numbers<br>with up to three digits, using<br>formal written methods of<br>columnar addition and<br>subtraction  | <ul> <li>add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</li> </ul> | add and subtract whole<br>numbers with more than 4<br>digits, including using formal<br>written methods (columnar<br>addition and subtraction) |
| Addition &<br>Subtraction<br>Inverse methods      | <ul> <li>recognise and use the inverse<br/>relationship between addition<br/>and subtraction and use this<br/>to check calculations and<br/>solve missing number<br/>problems.</li> </ul>       | estimate the answer to a calculation and use inverse operations to check answers  | •      | estimate and use inverse     operations to check answers     to a calculation  | use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy   | use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.                                |
| Addition &<br>Subtraction<br>Problem Solving      | <ul> <li>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as</li> <li>7 = □ - 9</li> </ul> | <ul> <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> </ul>    | •      | solve problems, including<br>missing number problems,<br>using number facts, place<br>value, and more complex<br>addition and subtraction  | solve addition and subtraction<br>two-step problems in<br>contexts, deciding which<br>operations and methods to<br>use and why                           | solve addition and subtraction<br>multi-step problems in<br>contexts, deciding which<br>operations and methods to<br>use and why               |



#### Curriculum Progression Map - Maths - Multiplication and Division

|   | Year 1   | Year 2   | Year 3  | Year 4  | Year 5   | Year 6  |
|---|--|--|---|---|--|---|
| Multiplication and<br>Division Facts            | <ul> <li>count in multiples of twos, fives and tens</li> <li>(copied from Number and Place Value)</li> </ul> | <ul> <li>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward</li> <li>(copied from Number and Place Value)</li> <li>recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> </ul> | <ul> <li>count from 0 in multiples of 4, 8, 50 and 100</li> <li>(copied from Number and Place Value)</li> <li>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</li> </ul>  | <ul> <li>count in multiples of 6, 7, 9, 25 and 1000</li> <li>(copied from Number and Place Value)</li> <li>recall multiplication and division facts for multiplication tables up to 12 × 12</li> </ul>  | <ul> <li>count forwards or backwards in steps of powers of 10 for any given number up to</li> <li>1 000 000</li> <li>(copied from Number and Place Value)</li> </ul>   | •   |
| Multiplication and Division Mental Calculation  |  | show that multiplication of<br>two numbers can be done in<br>any order (commutative)<br>and division of one number<br>by another cannot  | write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Written Methods) | <ul> <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 (appears also in Properties of Numbers)</li> </ul> | <ul> <li>multiply and divide numbers mentally drawing upon known facts</li> <li>multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</li> </ul>  | <ul> <li>perform mental calculations, including with mixed operations and large numbers</li> <li>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. <sup>3</sup>/<sub>8</sub>)</li> <li>(copied from Fractions)</li> </ul>  |
| Multiplication and Division Written calculation |  | calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (*), division (÷) and equals (=) signs  | write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods)  | multiply two-digit and<br>three-digit numbers by a<br>one-digit number using<br>formal written layout   | <ul> <li>multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers</li> <li>divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</li> </ul> | <ul> <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 short division where appropriate for the context</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> </ul> |

| Properties of Number, Multipoles, prime, factors, square and cube numbers |   |   |  | recognise and use factor pairs and commutativity in mental calculations (repeated)  | <ul> <li>identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</li> <li>know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</li> <li>establish whether a number up to 100 is prime and recall prime numbers up to 19</li> <li>recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)</li> </ul>                     | <ul> <li>identify common factors, common multiples and prime numbers</li> <li>use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>(copied from Fractions)</li> <li>calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm³) and cubic metres (m³), and extending to other units such as mm³ and km³</li> <li>(copied from Measures)</li> </ul> |
|---|---|---|--|---|---|--|
| Multiplication and Division Order of operation                            |   |   |  |   |   | use their knowledge of the order of operations to carry out calculations involving the four operations   |
| Multiplication and<br>Division<br>Inverse operations                      |   |   | <ul> <li>estimate the answer to a<br/>calculation and use inverse<br/>operations to check answers<br/>(copied from Addition and<br/>Subtraction)</li> </ul>  | <ul> <li>estimate and use inverse operations to check answers to a calculation</li> <li>(copied from Addition and Subtraction)</li> </ul>   |   | use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy   |
| Multiplication and<br>Division<br>Problem Solving                         | 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 | <ul> <li>solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</li> <li>solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> <li>solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</li> </ul> | <ul> <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 n objects are connected to m objects</li> <li>solve problems involving similar shapes where the scale factor is known or can be found</li> <li>(copied from Ratio and Proportion)</li> </ul> | <ul> <li>solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</li> <li>solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</li> <li>solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</li> </ul> | <ul> <li>solve problems involving addition, subtraction, multiplication and division</li> <li>solve problems involving similar shapes where the scale factor is known or can be found</li> <li>(copied from Ratio and Proportion)</li> </ul>   |



#### Curriculum Progression Map - Maths - Fractions

|  | Year 1  | Year 2   | Year 3  | Year 4   | Year 5  | Year 6  |
|--|---|--|---|--|---|---|
| Counting in fractional steps                             | Pupils should count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line (Non Statutory Guidance) | count up and down in tenths  | count up and down in<br>hundredths  |  |   |   |
| Recognising<br>Fractions.                                | recognise, find and name a<br>half as one of two equal parts<br>of an object, shape or<br>quantity  | <ul> <li>recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity</li> </ul> | <ul> <li>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</li> <li>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 and use fractions as numbers: unit fractions with small denominators</li> </ul> | recognise that hundredths<br>arise when dividing an object<br>by one hundred and dividing<br>tenths by ten   | <ul> <li>recognise and use         thousandths and relate them         to tenths, hundredths and         decimal equivalents</li> <li>(appears also in Equivalence)</li> </ul>  |   |
| Comparing<br>Fractions                                   |   |  | compare and order unit<br>fractions, and fractions with<br>the same denominators  |  | compare and order fractions<br>whose denominators are all<br>multiples of the same number   | compare and order fractions,<br>including fractions >1  |
| Comparing<br>Decimals                                    |   |  |   | compare numbers with the<br>same number of decimal<br>places up to two decimal<br>places   | read, write, order and<br>compare numbers with up to<br>three decimal places  | identify the value of each<br>digit in numbers given to<br>three decimal places   |
| Rounding including decimals                              |   |  |   | round decimals with one<br>decimal place to the nearest<br>whole number  | round decimals with two<br>decimal places to the nearest<br>whole number and to one<br>decimal place  | solve problems which require<br>answers to be rounded to<br>specified degrees of accuracy   |
| Equivalence including fractions Decimals and percentages |   | • write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ .            | recognise and show, using<br>diagrams, equivalent fractions<br>with small denominators  | <ul> <li>recognise and show, using diagrams, families of common equivalent fractions</li> <li>recognise and write decimal equivalents of any number of tenths or hundredths</li> <li>recognise and write decimal equivalents to 1/4; 1/2; 3/4</li> </ul> | <ul> <li>equivalent fractions of a given fraction, represented visually, including tenths and hundredths</li> <li>read and write decimal numbers as fractions (e.g. 0.71 = <sup>71</sup>/<sub>100</sub>)</li> <li>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</li> <li>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 100 as a decimal fraction</li> </ul> | <ul> <li>use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. <sup>3</sup>/<sub>8</sub>)</li> <li>recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.</li> </ul> |

| Addition and subtraction of Fractions          | • add and subtract fractions with the same denominator within one whole (e.g. $^{5}/_{7}$ + $^{1}/_{7}$ = $^{6}/_{7}$ ) | add and subtract fractions<br>with the same denominator   | <ul> <li>add and subtract fractions with the same denominator and multiples of the same number</li> <li>recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements &gt; 1 as a mixed number (e.g. <sup>2</sup>/<sub>5</sub> + <sup>4</sup>/<sub>5</sub> = <sup>6</sup>/<sub>5</sub> = 1<sup>1</sup>/<sub>5</sub>)</li> </ul> | <ul> <li>add and subtract fractions         with different denominators         and mixed numbers, using the</li> <li>concept of equivalent         fractions</li> </ul>  |
|--|---|---|---|---|
| Multiplication and<br>Division of<br>Fractions |   |   | multiply proper fractions and<br>mixed numbers by whole<br>numbers, supported by<br>materials and diagrams  | <ul> <li>multiply simple pairs of proper fractions, writing the answer in its simplest form         (e.g. <sup>1</sup>/<sub>4</sub> × <sup>1</sup>/<sub>2</sub> = <sup>1</sup>/<sub>8</sub>)</li> <li>multiply one-digit numbers with up to two decimal places by whole numbers</li> <li>divide proper fractions by whole numbers (e.g. <sup>1</sup>/<sub>3</sub> ÷ 2 = <sup>1</sup>/<sub>6</sub>)</li> </ul> |
| Multiplication and<br>Division of<br>Decimals  |   | 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  |   | <ul> <li>multiply one-digit numbers with up to two decimal places by whole numbers</li> <li>multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places</li> <li>identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100</li> <li>and 1000 where the answers are up to three decimal places</li> </ul>                       |
| Problem Solving                                | solve problems that involve all of the above  | <ul> <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>solve simple measure and money problems involving fractions and decimals to two decimal places</li> </ul> | <ul> <li>solve problems involving numbers up to three decimal places</li> <li>solve problems which require knowing percentage and decimal equivalents of <sup>1</sup>/<sub>2</sub>, <sup>1</sup>/<sub>4</sub>, <sup>1</sup>/<sub>5</sub>, <sup>2</sup>/<sub>5</sub>, <sup>4</sup>/<sub>5</sub> and those with a denominator of a multiple of 10 or 25</li> </ul>                          |   |



Curriculum Progression Map - Maths - Ratio and Proportion

|                | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6   |
|----------------|--------|--------|--------|--------|--------|--|
| Solve Problems |        |        |        |        |        | solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts   |
|                |        |        |        |        |        | solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison   |
|                |        |        |        |        |        | <ul> <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> |



Curriculum Progression Map - Maths - Algebra

|           | Year 1   | Year 2  | Year 3   | Year 4   | Year 5   | Year 6  |
|-----------|--|---|--|--|--|---|
| Equations | <ul> <li>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as</li> <li>7 = □ - 9</li> <li>(copied from Addition and Subtraction)</li> <li>represent and use number bonds and related subtraction facts within 20 (copied from Addition and Subtraction)</li> </ul> | <ul> <li>recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.</li> <li>(copied from Addition and Subtraction)</li> <li>recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</li> <li>(copied from Addition and Subtraction)</li> </ul> | <ul> <li>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. (copied from Addition and Subtraction)</li> <li>solve problems, including missing number problems, involving multiplication and division, including integer scaling</li> <li>(copied from</li> <li>Multiplication and Division)</li> </ul> |  | <ul> <li>use the properties of rectangles to deduce related facts and find missing lengths and angles</li> <li>(copied from Geometry: Properties of Shapes)</li> </ul> | <ul> <li>express missing number problems algebraically</li> <li>find pairs of numbers that satisfy number sentences involving two unknowns</li> <li>enumerate all possibilities of combinations of two variables</li> </ul> |
| Formulae  |  |   |  | <ul> <li>Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit.</li> <li>(Copied from NSG measurement)</li> </ul> |  | <ul> <li>use simple formulae</li> <li>recognise when it is possible to use formulae for area and volume of shapes</li> <li>(copied from Measurement)</li> </ul>   |
| Sequences | <ul> <li>sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening</li> <li>(copied from Measurement)</li> </ul>  | <ul> <li>compare and sequence intervals of time</li> <li>(copied from Measurement)</li> <li>rder and arrange combinations of mathematical objects in patterns</li> <li>(copied from Geometry: position and direction)</li> </ul>  |  |  |  | generate and describe linear<br>number sequences  |



#### Curriculum Progression Map - Maths - Measurement

|                           | Year 1  | Year 2  | Year 3   | Year 4  | Year 5  | Year 6   |
|---------------------------|---|---|--|---|---|--|
| Comparing and Estimating  | <ul> <li>compare, describe and solve practical problems for:</li> <li>lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half]</li> <li>mass/weight [e.g. heavy/light, heavier than, lighter than]</li> <li>capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter]</li> <li>time [e.g. quicker, slower, earlier, later]</li> <li>sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]</li> </ul> | <ul> <li>compare and order lengths, mass, volume/capacity and record the results using &gt;, &lt; and =</li> <li>compare and sequence intervals of time</li> </ul>  | <ul> <li>compare durations of events, for example to calculate the time taken by particular events or tasks</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 (appears also in Telling the Time)</li> </ul> | estimate, compare and calculate different measures, including money in pounds and pence     (also included in Measuring)  | <ul> <li>calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes (also included in measuring)</li> <li>estimate volume (e.g. using 1 cm³ blocks to build cubes and cuboids) and capacity (e.g. using water)</li> </ul>   | calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm³) and cubic metres (m³), and extending to other units such as mm³ and km³.  |
| Measuring and calculating | measure and begin to record the following:     lengths and heights     mass/weight     capacity and volume     time (hours, minutes, seconds)     recognise and know the value of different denominations of coins and notes  | <ul> <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>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> </ul> | <ul> <li>measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (I/mI)</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> </ul>   | <ul> <li>estimate, compare and calculate different measures, including money in pounds and pence</li> <li>(appears also in Comparing</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> </ul> | <ul> <li>use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling.</li> <li>measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</li> <li>calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes</li> <li>recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)</li> <li>(copied from Multiplication and Division)</li> </ul> | <ul> <li>solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</li> <li>(appears also in Converting)</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</li> <li>calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units [e.g. mm³ and km³].</li> <li>recognise when it is possible to use formulae for area and volume of shapes</li> </ul> |

| Telling the Time | <ul> <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> <li>recognise and use language relating to dates, including days of the week, weeks, months and years</li> </ul> | <ul> <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> <li>(appears also in Converting)</li> </ul> | <ul> <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</li> <li>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>(appears also in Comparing and Estimating)</li> </ul> | <ul> <li>read, write and convert time between analogue and digital 12 and 24-hour clocks</li> <li>(appears also in Converting)</li> <li>solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days</li> <li>(appears also in Converting)</li> </ul>   | solve problems involving<br>converting between units of<br>time  |  |
|------------------|---|--|--|--|--|--|
| Converting       |   | <ul> <li>know the number of minutes in an hour and the number of hours in a day.</li> <li>(appears also in Telling the Time)</li> </ul>  | know the number of seconds<br>in a minute and the number of<br>days in each month, year and<br>leap year   | <ul> <li>convert between different units of measure (e.g. kilometre to metre; hour to minute)</li> <li>read, write and convert time between analogue and digital 12 and 24-hour clocks</li> <li>(appears also in Converting)</li> <li>solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days</li> <li>(appears also in Telling the Time)</li> </ul> | <ul> <li>convert between different units of metric measure (e.g. kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</li> <li>solve problems involving converting between units of time</li> <li>understand and use equivalences between metric units and common imperial units such as inches, pounds and pints</li> </ul> | <ul> <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 to up to three decimal places</li> <li>solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</li> <li>(appears also in Measuring and Calculating)</li> <li>convert between miles and kilometres</li> </ul> |



Curriculum Progression Map - Maths - Geometry Properties of Shape

|  | Year 1  | Year 2  | Year 3  | Year 4   | Year 5  | Year 6  |
|--|---|---|---|--|---|---|
| Identifying shape<br>and their<br>properties | <ul> <li>recognise and name common 2-D and 3-D shapes, including:</li> <li>2-D shapes [e.g. rectangles (including squares), circles and triangles]</li> <li>3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].</li> </ul> | <ul> <li>recognise and name common 2-D and 3-D shapes, including:</li> <li>2-D shapes [e.g. rectangles (including squares), circles and triangles]</li> <li>3-D shapes [e.g. cuboids (including cubes), pyramids and spheres].</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, [for example, a circle on a cylinder and a triangle on a pyramid]</li> </ul> |   | identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]            | identify 3-D shapes, including cubes and other cuboids, from 2-D representations  | <ul> <li>recognise, describe and build simple 3-D shapes, including making nets</li> <li>(appears also in Drawing and Constructing)</li> <li>illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> </ul> |
| Drawing and<br>Constructing                  |   | and a mangle on a pyramia   | draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them   | complete a simple symmetric<br>figure with respect to a<br>specific line of symmetry   | draw given angles, and<br>measure them in degrees (o)   | <ul> <li>draw 2-D shapes using given dimensions and angles</li> <li>draw 2-D shapes using given dimensions and angles</li> </ul>  |
| Comparing and classifying                    |   | compare and sort common 2-D<br>and 3-D shapes and everyday<br>objects   |   | compare and classify<br>geometric shapes, including<br>quadrilaterals and triangles,<br>based on their properties and<br>sizes | <ul> <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>  | distinguish between regular<br>and irregular polygons based<br>on reasoning about equal sides<br>and angles   |
| Angles                                       |   |   | <ul> <li>recognise angles as 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 parallel lines</li> </ul> | identify acute and obtuse<br>angles and compare and order<br>angles up to two right angles<br>by size                          | <ul> <li>know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</li> <li>identify:         <ul> <li>angles at a point and one whole turn (total 360o)</li> <li>angles at a point on a straight line and ½ a turn (total 180o)</li> <li>other multiples of 90o</li> </ul> </li> </ul> | recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles  |



#### Curriculum Progression Map - Maths - Geometry Position and Direction

|                                   | Year 1   | Year 2   | Year 3 | Year 4   | Year 5  | Year 6   |
|-----------------------------------|--|--|--------|--|---|--|
| Positional direction and Movement | describe position, direction<br>and movement, including half,<br>quarter and three-quarter<br>turns. | 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) |        | <ul> <li>describe positions on a</li> <li>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> | 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 | <ul> <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> |
| Pattern                           |  | order and arrange<br>combinations of mathematical<br>objects in patterns and<br>sequences  |        |  |   |  |



#### St Peter's CE (VA) Primary School

Curriculum Progression Map - Maths - Statistics

|  | Year 1 | Year 2  | Year 3   | Year 4  | Year 5  | Year 6   |
|--|--------|---|--|---|---|--|
| Interpreting,<br>constructing and<br>presenting data |        | <ul> <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 totalling and comparing categorical data</li> </ul> | interpret and present data<br>using bar charts, pictograms<br>and tables   | interpret and present<br>discrete and continuous data<br>using appropriate graphical<br>methods, including bar charts<br>and time graphs                          | complete, read and interpret<br>information in tables,<br>including timetables  | interpret and construct pie<br>charts and line graphs and use<br>these to solve problems |
| Solving Problems                                     |        |   | solve one-step and two-step<br>questions [e.g. 'How many more?'<br>and 'How many fewer?'] using<br>information presented in scaled<br>bar charts and pictograms and<br>tables. | <ul> <li>solve comparison, sum and<br/>difference problems using<br/>information presented in bar<br/>charts, pictograms, tables<br/>and other graphs.</li> </ul> | <ul> <li>solve comparison, sum and<br/>difference problems using<br/>information presented in a<br/>line graph</li> </ul> | calculate and interpret the mean as an average   |