

## Year 4 – Mathematics Intent

| Block | Topic  | Term | Number of Weeks | Notes |
|-------|--|------|-----------------|-------|
| 1     | <a href="#">Number and Place Value</a>                                       |      |                 |       |
| 2     | <a href="#">Addition and Subtraction</a>                                     |      |                 |       |
| 3     | <a href="#">Multiplication and Division</a>                                  |      |                 |       |
| 4     | <a href="#">Fractions</a>  |      |                 |       |
| 5     | <a href="#">Decimals and Money</a>   |      |                 |       |
| 6     | <a href="#">Geometry</a>   |      |                 |       |
| 7     | <a href="#">Statistics</a>   |      |                 |       |
| 8     | <a href="#">Measure – Time</a>   |      |                 |       |
| 9     | <a href="#">Measure – Length, Perimeter &amp; Area , Mass &amp; Capacity</a> |      |                 |       |

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| Block 1   |  |   |   |
|---|--|---|---|
| Number and Place Value  |  |   |   |
| Substantive Knowledge   | Ready to Progress  | Key Performance Indicators  | Sequence of learning Detailed in Planning Overview  |
| <b>National Curriculum</b>  |  |   |   |
| Count in multiples of 25 and 1000<br>NB multiples of 6, 7 and 9 will be covered in the multiplication unit. |  | <ul style="list-style-type: none"> <li>Can count in multiples of 25 and 100 and explain the link between the two amounts</li> </ul>   | *Introduction to resources<br>*Counting in 1000s and 50s<br>*Composing 4-digit numbers and discussing column value of each digit of these numbers (including the role of 0 in a number)<br>*Standard and non-standard partitioning<br>*Recognising that there are 10 hundreds in a thousand, 100 tens in 1000, 1000 ones in 1000 and using this to represent a 4-digit number<br>*Finding 1000 more or less than a given number<br>* Ordering and comparing numbers beyond 1000<br>*Counting in 1000s, 500s, 100s, 50s and 25s<br>* Positioning numbers on a blank and scaled number lines with a variety of starting and ending points and a range of increments.<br>*Substantial problem solving<br>*Rounding numbers to the nearest 10, 100 and 1000<br>*Problem Solving<br>*Reading and representing numbers on a number line to include negative numbers<br>* Reading and writing Roman numerals up to 100 |
| Find 1000 more or less than a given number  |  | <ul style="list-style-type: none"> <li>Can find 1000 more than a given number and explain which digit changes</li> <li>Can find 1000 less than a given number and explain which digit changes</li> </ul>                            |   |
| Count backwards through zero to include negative numbers  |  | <ul style="list-style-type: none"> <li>Can count backwards in a range of multiples to include negative numbers and understand the value of the digits</li> </ul>  |   |
| Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)        | 4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100<br>4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning | <ul style="list-style-type: none"> <li>Can identify the number of thousands, hundreds, tens and ones in a 4-digit number</li> </ul>   |   |
| Order and compare numbers beyond 1000   | 4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.<br>4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts                       | <ul style="list-style-type: none"> <li>Can identify the larger of two 4-digit numbers and explain reasoning</li> <li>Can position 4-digit numbers on a number line and explain reasoning about where they are positioned</li> </ul> |   |

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|---|---|---|--|
| Identify, represent and estimate numbers using different representations  | 4NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100 | <ul style="list-style-type: none"> <li>• Can use equipment to represent numbers and to explain reasoning about the size of numbers</li> </ul>   |  |
| Round any number to the nearest 10, 100 or 1000   | 4NPV–3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.      | <ul style="list-style-type: none"> <li>• Can round numbers to the nearest 10</li> <li>• Can round numbers to the nearest 100</li> <li>• Can round numbers to the nearest 1000</li> <li>• Can explain the rules of rounding</li> </ul> |  |
| Solve number and practical problems that involve all of the above and with increasingly large positive numbers                          |   | <ul style="list-style-type: none"> <li>• Solve problems involving place value, including word problems and problems linked to money and measure</li> </ul>  |  |
| 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 style="list-style-type: none"> <li>• Can read Roman numerals to 100</li> <li>• Can understand how the numeral system developed over time</li> </ul>   |  |

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| Block 2  |   |   |   |
|--|---|---|---|
| Addition and Subtraction   |   |   |   |
| Substantive Knowledge<br>National Curriculum   | Ready to Progress   | Key Performance Indicators  | Sequence of learning<br>Detailed in Planning Overview   |
| Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate | 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100), | <ul style="list-style-type: none"> <li>• Can use place value to calculate mentally</li> <li>• Can add and subtract multiples of 1, 10, 100 and 1000</li> <li>• Can subtract by finding the difference</li> <li>• Can calculate mentally by reordering</li> <li>• Can calculate mentally by compensating</li> <li>• Can use a written methods to add two 4-digit numbers, including bridging 10 and 100</li> <li>• Can use a written methods to subtract two 4-digit numbers, including bridging 10 and 100</li> <li>• Can use a written methods to add and 3 and 4-digit number together, including bridging 10 and 100</li> <li>• Can use a written methods to subtract a 3-digit number from a 4-digit number, including bridging 10 and 100</li> <li>• Can reflect on when it is appropriate to use a standard written method in an addition or subtraction calculation with up to 4 digits</li> </ul> | <ul style="list-style-type: none"> <li>*Scaling known facts by 10, 100 and 1000 to create related facts</li> <li>*Adding multiples of 1, 10, 100 and 1000 to a number with no bridging</li> <li>*Adding 1 digit to a 3 or 4-digit number using bridging</li> <li>*Adding a multiple of 10 to a 3 or 4-digit number using bridging</li> <li>*Adding a multiple of 100 to a 4-digit number using bridging</li> <li>*Subtracting multiples of 1, 10, 100 and 1000 from a number with no bridging</li> <li>*Subtracting 1 digit from a 3 or 4-digit number using bridging</li> <li>*Subtracting a multiple of 10 from a 3 or 4-digit number using bridging</li> <li>*Subtracting a multiple of 100 from a 4-digit number using bridging</li> <li>*Using the concept of ‘finding the difference’ within subtraction</li> <li>*Understanding the inverse relationship between addition and subtraction and generating fact families</li> <li>*Using inverse operations within addition and subtraction to check calculations</li> </ul> |
| Estimate and use inverse operations to check answers to a calculation  |   | <ul style="list-style-type: none"> <li>• Can estimate the answer of an addition or subtraction up to 4 digits</li> <li>Can use addition and subtraction to calculate the inverse</li> </ul>   | <ul style="list-style-type: none"> <li>*Reordering calculations to look for known facts and aid efficiency</li> <li>* Compensating</li> <li>*Estimation</li> </ul>  |
| Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.                  |   | <ul style="list-style-type: none"> <li>• Can identify whether a word problem needs to be solved using addition, subtraction or combination of both</li> <li>• Can identify the most appropriate method of calculation to use to solve a problem</li> <li>• Can use a calculation skill in a problem using units of measure (km, m, cm, mm, kg, g, l, ml, hours, minutes and seconds)</li> </ul>   | <ul style="list-style-type: none"> <li>*Standard written method of addition</li> <li>*Standard written method of subtraction</li> <li>*Adjusting (consider which children can grasp and retain this method)</li> <li>*Reflecting on the most efficient strategy</li> <li>*Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.</li> </ul>  |

| Block 3  |   |   |  |
|--|---|---|--|
| Multiplication and Division  |   |   |  |
| Substantive Knowledge<br><br>National Curriculum   | Ready to Progress   | Key Performance Indicators  | Sequence of learning<br>Detailed in Planning Overview  |
| Recall multiplication and division facts for multiplication tables up to $12 \times 12$  | 4NF–1 Recall multiplication and division facts up to $12 \times 12$ and recognise products in multiplication tables as multiples of the corresponding number.   | <ul style="list-style-type: none"> <li>• Can explain how to use known facts to derive others</li> <li>• Can recall the 2x 5x 10x tables from Year 2</li> <li>• Can recall the 3x 4x 8x tables from Year 3</li> <li>• Can recall the 6x table</li> <li>• Can recall the 7x table</li> <li>• Can recall the 9x table</li> <li>• Can recall the 11x table</li> <li>• Can recall the 12x table</li> <li>• Can derive related division facts</li> <li>• Understands that division cannot be done in any order</li> </ul> | *Recap 2, 5 and 10 times tables including patterns and generalisations<br>*Recap 4, 8 and 3 times tables including patterns and generalisations<br>*Teach 6, 12, 9, 11 and 7 times tables<br>*Links and the development of multiplication<br>*Multiplying by 10 and 100<br>*Dividing by 1, 10 and 100<br>*Using scaling numbers by 10 and 100 to solve calculations using known facts  |
| 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 | 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)<br><br>4MD–1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.<br><br>4MD–3 Understand and apply the distributive property of multiplication | <ul style="list-style-type: none"> <li>• Understands how a multiplication fact can be used to multiply by a multiple of 10</li> <li>• Understands how a multiplication fact can be used to multiply by a multiple of 100</li> <li>• Understands how to multiply 3 one-digit numbers together</li> <li>• Understands the effect of multiplying by 1 and 0</li> <li>• Understands the effect of dividing by 1</li> <li>• Understands how a multiplication fact can be used to solve a division calculation</li> </ul> | *Using arrays investigate fact families and the commutative law and inverse relationship of multiplication and division<br>*Solve missing box calculations using known facts and inverse operations<br>*Find factors of numbers using a systematic approach<br>*Multiplying 3 numbers using the most efficient strategy<br>*Solving problems including using scaling and correspondence<br>*Strategies for mental calculation (partitioning, doubling and halving, compensating)<br>Consolidation and problem solving with mental strategies |

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| <p>Recognise and use factor pairs and commutativity in mental calculations</p>   | <p>4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.</p>  | <ul style="list-style-type: none"> <li>• Can identify factors of a 2-digit number</li> <li>• Understands that multiplication can be done in any order</li> </ul>   | <p>*Written strategy for multiplication (Check school calculation policy)<br/>           * Written strategy for division if stated in school calculation policy<br/>           *Solve a range of problems using multiplication and division using an efficient strategy.<br/>           *Solve multi-step problems involving all 4 operations. Choose an efficient method for calculating and explain which methods have been used.</p> |
| <p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout</p>  | <p>4MD–1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.</p> | <ul style="list-style-type: none"> <li>• Can use a formal written method to multiply TU by U</li> <li>• Can use a formal written method to multiply HTU by U</li> </ul>  |   |
| <p>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.</p> | <p>4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders</p>   | <ul style="list-style-type: none"> <li>• Can solve word problems involving multiplication</li> <li>• Can solve word problems involving division</li> <li>• Can solve scaling problems involving measures</li> <li>• Can solve correspondence problems e.g. <i>There are 3 starters, mains and desserts on a menu, how many possible meals could you have?</i></li> </ul> |   |

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| Block 4   |  |   |   |
|---|--|---|---|
| Fractions   |  |   |   |
| Substantive Knowledge<br>National Curriculum  | Ready to Progress  | Key Performance Indicators  | Sequence of learning<br>Detailed in Planning Overview   |
| Recognise and show, using diagrams, families of common equivalent fractions   | <p>4F-1 Reason about the location of mixed numbers in the linear number system</p> <p>4F-2 Convert mixed numbers to improper fractions and vice versa.</p> | <ul style="list-style-type: none"> <li>• Can use multiplication to generate equivalent fractions.</li> <li>• Can simplify fractions using common factors</li> </ul> | <p>*Recapping children’s prior knowledge of fractions</p> <p>*Investigating using pictorial or practical resources how to make a whole</p> <p>*Placing fractions on a 0-1 number line</p>   |
| 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 |  | <ul style="list-style-type: none"> <li>• Can use unit fractions to solve a problem.</li> <li>• Can use non-unit fractions to solve a problem.</li> </ul>            | <p>*Placing mixed numbers and improper fractions on a number line</p> <p>Converting mixed numbers and improper fractions</p> <p>*Equivalent fractions using multiplication</p> <p>*Finding fractions of an amount (unit and non-unit fractions)</p> |
| Add and subtract fractions with the same denominator  | 4F-3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers   | <ul style="list-style-type: none"> <li>• Can add and subtract fractions with a common denominator</li> </ul>  | <p>*Adding fractions with the same denominator (total may exceed one whole)</p> <p>*Subtracting fractions with the same denominator (start number may be more than one whole)</p>   |

| Block 5  |   |  |   |
|--|---|--|---|
| Decimals and Money   |   |  |   |
| Substantive Knowledge<br>National Curriculum   | Ready to Progress   | Key Performance Indicators   | Sequence of learning<br>Detailed in Planning<br>Overview  |
| Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.                    |   | <ul style="list-style-type: none"> <li>Understands hundredths are dividing an object or a number into 100 equal parts.</li> <li>Understand tenths are dividing an object or a number into 10 equal parts.</li> <li>Understands hundredths can be made by dividing tenths into 10 equal parts.</li> <li>Can find and place hundredths on a number line.</li> <li>Can use hundredths in money and measure</li> <li>Can compare and order numbers to 2dp</li> </ul> | *Recap year 3 decimals unit and look at counting in tenths<br>*Using money, base 10 or a bead string investigate a hundredth as a fraction and a decimal (1 out of 100 beads is 1/100 or 0.01 because we have 1 in the hundredth column<br>*Count up and down in hundredths |
| Recognise and write decimal equivalents of any number of tenths or hundredths  |   | <ul style="list-style-type: none"> <li>Can identify and calculate <math>\frac{1}{10}</math> as a decimal</li> <li>Can identify the pattern when finding other tenths.</li> <li>Can identify and calculate <math>\frac{1}{100}</math> as a decimal</li> <li>Can identify the pattern when finding other hundredths.</li> </ul>  | *Compare and order decimals<br>*Positioning hundredths on a number line and using this to order and compare decimals to 2 dp  |
| Recognise and write decimal equivalents to $\frac{1}{4}$ , $\frac{1}{2}$ and $\frac{3}{4}$   |   | <ul style="list-style-type: none"> <li>Can recall decimal equivalent to <math>\frac{1}{2}</math></li> <li>Can recall decimal equivalent to <math>\frac{1}{4}</math></li> <li>Can recall decimal equivalent to <math>\frac{3}{4}</math></li> </ul>  | *Rounding Decimals<br>*Dividing a 1 or 2-digit number by 10 or 100 and reading the answer as ones, tenths and hundredths  |
| 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 | 4MD-1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. | <ul style="list-style-type: none"> <li>Can explain the effect of dividing a one-digit number by 10</li> <li>Can explain the effect of dividing a two-digit number by 10</li> <li>Can explain the effect of dividing a one-digit number by 100</li> <li>Can explain the effect of dividing a two-digit number by 100</li> </ul>   | *Identifying where 0.5, 0.25 and 0.75 would be on a number line and discussing that these are positioned at $\frac{1}{2}$ , $\frac{1}{4}$ and $\frac{3}{4}$<br>*Solve problems involving money  |
| Round decimals with one decimal place to the nearest whole number  |   | <ul style="list-style-type: none"> <li>Can identify the nearest whole number to a one decimal place number.</li> </ul>   |   |



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| Compare numbers with the same number of decimal places up to two decimal places                 |  | <ul style="list-style-type: none"> <li>• Can compare and order 1 dp numbers on a number line.</li> <li>• Can compare 2dp numbers on a number line</li> </ul>   |  |
| Estimate, compare and calculate different measures, including money in pounds and pence         |  | <ul style="list-style-type: none"> <li>• Can use decimal place value knowledge to compare different measures.</li> <li>• Can calculate with measures</li> </ul>  |  |
| Solve simple measure and money problems involving fractions and decimals to two decimal places. |  | <ul style="list-style-type: none"> <li>• Knows how many 10ps are in a £1</li> <li>• Knows how many 1ps are in a £1</li> <li>• Knows how many centimetres are in a metre.</li> <li>• Can solve problems involving money to 2dp</li> <li>• Can solve problems involving length to 2dp</li> </ul> |  |

| Block 6  |   |   |  |
|--|---|---|--|
| Geometry   |   |   |  |
| Substantive Knowledge<br>National Curriculum   | Ready to Progress   | Key Performance Indicators  | Sequence of learning<br>Detailed in Planning Overview  |
| Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes | 4G–2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons. | <p>Can recall and recognise in a variety of shapes that:</p> <ul style="list-style-type: none"> <li>• an equilateral triangle has three equal sides and three equal angles</li> <li>• isosceles triangles have two equal sides and two equal angles</li> <li>• right angled triangles have one right angle</li> <li>• scalene triangles have no equal sides and no equal angles</li> <li>• triangles cannot have more than one obtuse angle</li> <li>• squares have four equal sides and four right angles</li> <li>• rectangles have two pairs of equal and parallel sides and four right angles</li> <li>• parallelograms have two pairs of equal and parallel sides</li> <li>• rhombuses have four equal sides, two pairs of parallel sides</li> <li>• trapeziums have one pair of parallel sides</li> <li>• kites have two pairs of equal sides which are adjacent, two equal angles</li> <li>• Can recall the names of other polygons and their associated numbers of sides</li> </ul> | <p>*Recap 2D shape – names and properties of shapes (regular and irregular shapes)</p> <p>*Recognising angles (obtuse, acute and right angles)</p> <p>*Comparing angles</p> <p>*Identifying angles in shapes</p> <p>*Investigating triangles, classifying and sorting</p> <p>*Investigating quadrilaterals, classifying and sorting</p> <p>*Investigating symmetrical patterns (one line of symmetry, 2 lines of symmetry, line of symmetry parallel to gridlines, line of symmetry at an angle to the gridlines)</p> <p>*Exploring symmetry in shapes</p> <p>*Complete a simple symmetric figure with respect to a specific line of symmetry</p> <p>*Using coordinates to position points and to read the position of points using the language of x and y axis</p> <p>*Can use knowledge of properties of shapes to plot a missing coordinate of a given polygon</p> |
| Identify acute and obtuse angles and compare and order angles up to two right angles by size                       |   | <ul style="list-style-type: none"> <li>• Can identify acute angles on their own and within shapes</li> <li>• Can identify obtuse angles on their own and within shapes</li> <li>• Can compare two or more angles up to 180°</li> </ul>  |  |

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| Identify lines of symmetry in 2-D shapes presented in different orientations                       | 4G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry. | <ul style="list-style-type: none"> <li>• Can recall and recognise in different shapes that:</li> <li>• A square has four lines of symmetry</li> <li>• A rectangle has two lines of symmetry</li> <li>• A rhombus has two lines of symmetry</li> <li>• A parallelogram has no lines of symmetry</li> <li>• A trapezium may or may not have a line of symmetry</li> <li>• A kite has one line of symmetry</li> <li>• An equilateral triangle has three lines of symmetry</li> <li>• An isosceles triangle has one line of symmetry</li> <li>• A regular polygon has the same of lines of symmetry as it has sides</li> </ul> | <p>*Can use the language of coordinates and positional language to describe how a shape has been translated</p> <p>*Can translate a shape when given coordinates and positional language</p> <p>*Substantial problem solving</p> |
| Complete a simple symmetric figure with respect to a specific line of symmetry                     |   | Can complete a pattern drawn on a square grid with: <ul style="list-style-type: none"> <li>• one line of symmetry drawn parallel to the gridlines</li> <li>• one line of symmetry drawn at an angle to the gridlines</li> <li>• two lines of symmetry</li> </ul>   |  |
| Describe positions on a 2-D grid as coordinates in the first quadrant                              | <ul style="list-style-type: none"> <li>• Can distinguish between the x and y axis.</li> <li>• Can draw a pair of axes in one quadrant with equal scales and integer labels.</li> </ul>                      |  |  |
| Describe movements between positions as translations of a given unit to the left/right and up/down | 4G-1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant   | <ul style="list-style-type: none"> <li>• Can describe position of a vertex of a 2D shape in the first quadrant using a pair of coordinates.</li> <li>• Can translate a shape using left/right and up/down</li> </ul>   |  |
| Plot specified points and draw sides to complete a given polygon                                   |   | <ul style="list-style-type: none"> <li>• Can use properties of shape to complete the vertices of a simple shape.</li> </ul>  |  |

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| Block 7   |  |   |   |
|---|--|---|---|
| Statistics  |  |   |   |
| Substantive Knowledge<br>National Curriculum  | Ready to Progress  | Key Performance Indicators  | Sequence of learning<br>Detailed in Planning Overview   |
| Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. | No specific Ready to Progress statements for statistics but use the opportunity to consolidate prior statements as appropriate e.g. 4NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts | <ul style="list-style-type: none"> <li>Understands which is the best method of recording data e.g. <i>compare data presented in a bar chart and line graph and reason as to which is the most effective</i></li> <li>Can use an appropriate scale when representing data</li> <li>Can answer questions from a range of different graphs e.g. <i>In which months was the temperature below 10°C?</i></li> </ul>    | <ul style="list-style-type: none"> <li>*Draw and interpret pictograms</li> <li>*Draw and interpret bar charts</li> <li>*Answer questions from a range of different graphs – using discrete data</li> <li>*Solve comparison, sum and difference problems using information presented in charts</li> <li>*Introduce continuous data and discuss how this is different to discrete</li> <li>*Represent continuous data as a line graph (link to science/topic)</li> <li>*Read and interpret a range of line graphs and answer questions on the data</li> <li>* Answer questions from a range of different graphs – using discrete data</li> <li>*Collect continuous data and choose how to present this and with what scale</li> <li>*Problem solving</li> </ul> |
| Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. |  | <ul style="list-style-type: none"> <li>Can answer questions from a bar chart that involve comparison, sum and difference</li> <li>Can answer questions from a pictogram that involve comparison, sum and difference</li> <li>Can answer questions from a table that involve comparison, sum and difference</li> <li>Can answer questions from a line graph that involve comparison, sum and difference</li> </ul> |   |

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| <b>Block 8</b>  |                          |   |   |
|---|--------------------------|---|---|
| <b>Measure – Time</b>   |                          |   |   |
| <b>Substantive Knowledge</b>  | <b>Ready to Progress</b> | <b>Key Performance Indicators</b>   | <b>Sequence of learning<br/>Detailed in Planning Overview</b>   |
| <b>National Curriculum</b>  |                          |   |   |
| Convert between different units of measure [for example, kilometre to metre; hour to minute]                  |                          | <ul style="list-style-type: none"> <li>• Knows and understands the relationships between familiar units of measurement</li> <li>• Can use multiplication and division to aid conversion</li> <li>• Can convert an hour into minutes and vice versa</li> <li>• Can suggest the most appropriate unit of measure</li> </ul> | *Reading and writing time on analogue clocks<br>*Reading and writing time on digital clocks and converting time between analogue and digital 12-hour clocks<br>*Reading and writing time on 24-hour clocks and converting from 12-hour to 24-hour digital clocks and analogue clocks<br>*Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days<br>*Making links and consolidation |
| Read, write and convert time between analogue and digital 12- and 24-hour clocks                              |                          | <ul style="list-style-type: none"> <li>• Can read and understand 24-hour time</li> <li>• Can relate 24 hr notation to am and pm</li> <li>Can covert 12 hr into 24 hour and vice versa</li> </ul>  |   |
| Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days |                          | <ul style="list-style-type: none"> <li>• Can solve problems involving familiar conversions</li> <li>Can interpret the answer in more than one measure</li> </ul>  |   |

| Block 9  |  |  |   |
|--|--|--|---|
| Measure – Length, Perimeter, Area, Capacity & Mass   |  |  |   |
| Substantive Knowledge<br>National Curriculum   | Ready to Progress  | Key Performance Indicators   | Sequence of learning<br>Detailed in Planning Overview   |
| Convert between different units of measure [for example, kilometre to metre; hour to minute]               | No specific Ready to Progress statements for Length and Perimeter but use the opportunity to consolidate prior statements as appropriate e.g. 4NPV–3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each. | <ul style="list-style-type: none"> <li>Knows and understands the relationships between familiar units of measurement</li> <li>Can use multiplication and division to aid conversion.</li> <li>Can convert km into m and vice versa.</li> <li>Can convert l into ml and vice versa.</li> <li>Can convert g into kg and vice versa</li> <li>Can suggest the most appropriate unit of measure.</li> </ul> | <ul style="list-style-type: none"> <li>*Recap tools and language of measure.</li> <li>*Recap units of measure and which units are used to measure different things.</li> <li>*Convert between different units of measure [for example, kilometre to metre, mm to cm]</li> <li>*Convert between different units of measure [g to kg]</li> <li>*Convert between different units of measure [l to ml]</li> </ul> |
| Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. | NPV–4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts  | <ul style="list-style-type: none"> <li>Can measure sides of a rectangle to calculate the perimeter.</li> <li>Can generalise about the perimeter of a rectangle using words and symbols.</li> <li>Can use the formulae <math>2(L+W)</math> to calculate perimeter of a rectangle.</li> <li>Can work out the perimeter of irregular shapes.</li> </ul>   | <ul style="list-style-type: none"> <li>*Estimate, compare and calculate different measures</li> <li>*Problem solving around the concepts covered</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>  |
| Find the area of rectilinear shapes by counting squares  | 4MD–1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.  | <ul style="list-style-type: none"> <li>Can relate area to arrays and multiplication.</li> <li>Can find the area of a rectangle by counting squares.</li> <li>Can generalise about the area of a rectangle using words and symbols.</li> </ul>  |   |
| Estimate, compare and calculate different measures, including money in pounds and pence                    |  | <ul style="list-style-type: none"> <li>Can use decimal place value knowledge to compare different measures.</li> <li>Can calculate with measures</li> </ul> <p><b>This is covered within Decimals &amp; Money Block</b></p>  |   |