

Block 1

W1	4.1.1 Read and write 4-digit numbers, and visualise them using place value counters; recognise the relationship between hundreds and thousands (e.g. 14 hundreds = 1400)	4.1.1 Partition 4-digit numbers	4.1.2 Write 4-digit numbers in words	4.1.3 Find 1000 more and 1000 less than 4-digit numbers;	4.1.3 Add and subtract multiples of 1000 to/from 4 digit numbers
W2	4.1.5 compare 4-digit numbers using >, < and =	4.1.4 Order three or more 4-digit numbers, understanding the words “ascending order”, “descending order”, “largest/greatest”, “smallest/least”, “more than” and “less than”.	4.1.6 Know that there are numbers below zero and fill blank spaces on number lines that include negative numbers up to -20	4.1.6 Use a number line to continue sequences that include negative numbers, including counting in 1s, 2s and 3s	4.1.7 Understand how to use inequalities in the context of negative numbers (e.g. $-3 > -5$) and order negative numbers
W3	4.1.8 Know the meaning of Roman numerals for 1, 5, 10, 50 and 100 and combine them to make numbers where adding only takes place (e.g. 23, 51, etc)	4.1.9 Know that Roman numerals didn't use more than three numerals in a row additively; know how subtraction was used (e.g. 90 = XC; 990 = CM; etc)	4.1.10 Further understand the way in which our base 10 counting system works and why zero is necessary for it to work by exploring counting in other bases (e.g. 13 in base 5 means 8 in base 10)	4.1.13 & 4.1.14 Recognise when mental or formal written methods are more appropriate for problems using the four operations	4.1.13 & 4.1.14 Solve word problems for the four operations (across the variety of arithmetic structures) using a mixture of mental and formal written methods
W4	4.1.15 Solve word problems for the four operations using a mixture of mental and formal written methods with a focus on using 4-digit numbers; use bar models to visualise the problem where necessary	Consolidation of 4.1 Link to reasoning and problem-solving activities	Consolidation of 4.1 Link to reasoning and problem-solving activities	4.6.3 Count in multiples of 9 forwards and backwards and begin to find multiplication and division facts for the 9x table	4.2.1 Read analogue clocks to the nearest minute
W5	4.2.2 Read digital clocks and put the times shown into words	4.2.3 Convert between representations of time between 12-hour digital clocks and analogue clocks	4.2.5 Convert between 12-hour and 24-hour digital clocks	4.2.4 & 4.2.7 Find the duration of events where the start and end time are of an event are known, using a blank number line to visualise	4.2.4 & 4.2.7 Find the start or end time of events where one of these is known along with the duration, using a blank number line to visualise
W6	4.2.6 Solve time word problems that include analogue, 12-hour digital and 24-hour digital representations of time	4.2.8 Solve time problems involving conversion between hours and minutes	4.2.9 & 4.2.10 Solve time problems involving conversion between minutes and seconds	4.2.11 Know how many days there are in a year (including a leap year) and how many days there are in each month	4.2.12 Solve problems that require knowledge of how many days there are in each month

Block 2

W1	<p>Consolidation of 4.2</p> <p>Link to reasoning and problem-solving activities</p>	<p>4.3.2 Use mental methods (perhaps with jottings linked to the grid method) to calculate multiplication of 2-digit numbers by 1-digit numbers</p>	<p>4.3.3 Solve missing number problems for multiplication and division, using understanding that the two operations are the inverse of each other</p>	<p>4.3.4 Find factors to multiply mentally e.g. $16 \times 25 \rightarrow 4 \times 4 \times 25 \rightarrow 4 \times 100 = 400$ $18 \times 50 \rightarrow 9 \times 2 \times 50 \rightarrow 9 \times 100 = 900$</p>	<p>4.3.4 Use compensation to multiply mentally e.g. $3 \times 99 \rightarrow (3 \times 100) - (3 \times 1) = 297$</p>
W2	<p>4.3.4 Use constant ratio to divide mentally e.g. $600 \div 30 \rightarrow 60 \div 3 = 20$ $225 \div 15 \rightarrow 450 \div 30 \rightarrow 45 \div 3 = 15$</p>	<p>4.6.2 Count in multiples of 7 forwards and backwards and begin to find multiplication and division facts for the 7x table</p>	<p>4.3.5 Solve place value problems involving numbers up to 4 digits (e.g. Find the largest number possible from the digits 3, 5, 2 and 8)</p>	<p>4.3.6 Understand the equivalence between contracted and expanded written addition with 2 digit numbers with no renaming, and understand the value of each digit based on its place</p>	<p>4.3.6 Using place value counters, visualise addition of 2-digit numbers with renaming as the addition progresses, and relate this to a contracted form of addition</p>
W3	<p>4.3.6 Add 2-digit numbers using a contracted written method including renaming</p>	<p>4.3.7 Add two 3-digit and 4-digit numbers using a contracted written method</p>	<p>4.3.7 Add three numbers with mixed digits using a contracted written method</p>	<p>4.3.8 Understand the equivalence between contracted and expanded written subtraction with 2 digit numbers with no renaming, and understand the value of each digit based on its place</p>	<p>4.3.8 Using place value counters, visualise subtraction of 2-digit numbers with renaming as the first step where necessary</p>
W4	<p>4.3.8 Subtract 2-digit numbers from 2-digit numbers (some with renaming required) using a contracted written method</p>	<p>4.3.8 Subtract 2-digit and 3-digit numbers from 3-digit numbers where renaming is required using a contracted written method (NB: complete <u>all</u> necessary renaming before subtracting)</p>	<p>4.3.9 Subtract from 4-digit numbers using a contracted form, including with minuends that require repeated renaming due to zeroes (NB: complete <u>all</u> necessary renaming before subtracting)</p>	<p>4.3.7 & 4.3.9 Solve mixed addition and subtraction calculations with numbers up to 4 digits</p>	<p>4.3.11 Solve two-step addition and subtraction word problems that require a part-whole bar model (i.e. aggregation, augmentation, partition and reduction)</p>
W5	<p>4.3.12 Solve two-step addition and subtraction word problems that require a comparison bar model (i.e. comparison structures)</p>	<p>4.3.13 Solve two-step addition and subtraction word problems in the context of money that require part-whole or comparison bar models</p>	<p>Consolidation of 4.3</p> <p>Link to reasoning and problem-solving activities</p>	<p>Consolidation of 4.3</p> <p>Link to reasoning and problem-solving activities</p>	<p>Consolidation of 4.3</p> <p>Link to reasoning and problem-solving activities</p>
W6	<p>Count in multiples of 11 forwards and backwards and begin to find multiplication and division facts for the 11x table</p>	<p>4.4.1 Find the multiple of 10 above and below any number up to 9999, showing this on a number line</p>	<p>4.4.1 Find the multiple of 100 above and below any number up to 9999, showing this on a number line</p>	<p>4.4.1 Find the multiple of 1000 above and below any number up to 9999, showing this on a number line</p>	<p>4.4.1 Find the multiple of 10 above and below any number up to 9999 and the midpoint between the two multiples, showing this on a number line</p>

Block 3

W1	4.4.1 Find the multiple of 100 above and below any number up to 9999 and the midpoint between the two multiples, showing this on a number line	4.4.1 Find the multiple of 1000 above and below any number up to 9999 and the midpoint between the two multiples, showing this on a number line	4.4.1 Know what rounding means and use a number line to round any number up to 9999 to the nearest 10	4.4.1 Know what rounding means, and using a number line to round any number up to 9999 to the nearest 100	4.4.1 Know what rounding means, and using a number line to round any number up to 9999 to the nearest 1000
W2	4.4.3 Round to the nearest 10, 100 or 1000 using real contexts	Count in multiples of 12 forwards and backwards and begin to find multiplication and division facts for the 12x table	4.4.4 Understand multiplication in the context of arrays and areas, and use these to understand the distributive law for multiplication across addition and subtraction	4.4.5 Understand that the grid method works by using the distributive law for multiplication across addition and that other methods can be used based on this idea; begin to see column written multiplication as an example of this	4.4.6 Multiply 2-digit and 3-digit numbers by 1-digit numbers with contracted written multiplication <u>without renaming</u> e.g. $\begin{array}{r} 234 \\ \times 2 \\ \hline 468 \end{array}$
W3	4.4.6 Use place value counters to visualise contracted written multiplication with limited renaming, for example via doubling of 2-digit and 3-digit numbers	4.4.6 Multiply 2-digit and 3-digit numbers by 1-digit numbers with contracted written multiplication with limited renaming e.g. $\begin{array}{r} 237 \\ \times 2 \\ \hline 474 \\ 1 \end{array}$	4.4.6 Multiply 2-digit and 3-digit numbers by 1-digit numbers with contracted written multiplication with repeated renaming e.g. $\begin{array}{r} 234 \\ \times 5 \\ \hline 1150 \\ 112 \end{array}$	4.4.7 Multiply numbers up to 9999 by 1-digit numbers using a formal written method	4.4.8 Know that the formal written method is a tool to be used when required, rather than the 'correct method', and select informal and formal methods to suit different questions (e.g. 15 x 6 might suit an informal method while 179 x 6 might suit a formal method)
W4	4.4.9 & 4.4.10 Solve scaling and correspondence problems using multiplication and division where a single thing scales using a single bar model	4.4.9 & 4.4.10 Solve scaling and correspondence problems using multiplication and division where things are compared using a comparison bar model	4.4.11 Systematically list all options for given combinations (cartesian product structure of multiplication)	4.4.12 & 4.4.13 Use inverse operations to check the answers to written calculations	Consolidation 4.4 Link to reasoning and problem-solving activities
W5	Consolidation 4.4 Link to reasoning and problem-solving activities	Consolidation 4.4 Link to reasoning and problem-solving activities	4.5.1 & 4.5.2 Read coordinates in one quadrant including those that sit on the x or y-axis	4.5.3 & 4.5.4 Plot coordinates on given axes	4.5.5 & 4.5.6 Plot simple 2D shapes using coordinates
W6	4.5.7 Find missing coordinates of a polygon using coordinates	4.6.4 Count forwards and backwards in multiples of 25 and quickly recognise multiples of 25; multiply multiples of 4 by 25 by using factors (e.g. 12 x 25 → 3 x 4 x 25 → 3 x 100 = 300)	4.6.5 Understand that 1000 can be divided into 2, 4, 5 and 10 equal parts and read scales marked with multiples of 1000 which are divided into 2, 4, 5 and 10 equal parts	4.6.6 Using dienes, visualise tenths as one tenth of one; recognise hundredths as one hundredth of 1 and one tenth of 1/10; recognise different tenths and hundredths in dienes (e.g. 0.3 as 3/10 and 0.08 as 8/100)	4.6.6 Using dienes, visualise tenths as one tenth of one; recognise hundredths as one hundredth of 1 and one tenth of 1/10; recognise different tenths and hundredths in dienes (e.g. 0.3 as 3/10 and 0.08 8/100)

Block 4

W1	4.6.8 , 4.8.1 , 4.8.2 & 4.8.3 Recognise tenths on a number line from 0 to 10 in both decimal and fraction form	4.6.8 , 4.8.1 , 4.8.2 & 4.8.3 Recognise hundredths on a number line from 0 to 10 in decimal form, using multiples of 0.1 as “landmarks”	4.8.4 Convert between ones, tenths and hundredths (e.g. $\frac{4}{10} = \frac{40}{100}$)	4.6.7 & 4.8.6 Compare decimals/fractions containing tenths and hundredths, including those with mixed numbers of decimals places	4.6.7 & 4.8.6 Order decimals/fractions containing tenths and hundredths, including those with mixed numbers of decimals places
W2	4.6.9 & 4.6.10 Add and subtract fractions with the same denominator, and represent these with pictures; recognise why the denominator stays the same when adding and subtracting fractions with the same denominator	4.6.11 Recognise and create fractions that are equivalent to $\frac{1}{2}$, including pictorial representations that show this equivalence	4.6.12 Recognise and create fractions that are equivalent to $\frac{1}{4}$ and $\frac{3}{4}$ including pictorial representations that show this equivalence	4.6.13 Recognise equivalent fractions using fractions walls; (note that fraction walls are merely bar models represented one below the other)	4.6.13 Create equivalent fractions through multiplication and division of numerators and denominators by the same number (including improper fractions)
W3	4.6.15 Find unit fractions of amounts up to 100 using known multiplication facts	4.6.16 Find non-unit fractions of amounts up to 100 using known multiplication facts	4.6.17 Use understanding of inverse to find missing numbers in fractions calculations	4.6.18 & 4.6.19 Solve simple fractions problems in the context of measures and money	4.6.18 & 4.6.19 Solve fractions problems including fraction increases and decreases in the context of measures and money (e.g. $\frac{1}{5}$ off a price)
W4	Consolidation of 4.5 & 4.6 Link to reasoning and problem-solving activities	Consolidation of 4.5 & 4.6 Link to reasoning and problem-solving activities	Consolidation of 4.5 & 4.6 Link to reasoning and problem-solving activities	4.7.1 Translate a point left, right, up or down (or a combination of two) on a square grid	4.7.2 Translate a shape left, right, up or down (or a combination of two) on a square grid
W5	4.7.3 Translate shapes on a coordinate grid and describe the new coordinates for the shape	4.7.4 Determine translations that have taken place from observations of shapes moved	4.7.5 Identify acute angles, obtuse angles and right angles and understand the amount of turn associated with each definition	4.7.6 Compare and order angles based on their magnitude; know that angles remain the same even as a given shape’s size is increased or decreased	4.7.7 Describe different triangles and quadrilaterals in terms of their angles
W6	4.7.8 & 4.7.9 Identify how many lines of reflective symmetry are present in 2D shapes, including in those with no line of symmetry and in shapes presented in a variety of orientations	4.7.8 & 4.7.9 Draw lines of symmetry on 2D shapes, including those with multiple lines of symmetry and presented in a variety of orientations	4.7.10 Identify lines of symmetry in 2D representations of real-life objects (e.g. flags, patterns, etc)	4.7.11 Given half of a shape and a mirror line, complete 2D symmetrical shapes using a mirror for guidance in shapes which have horizontal and vertical lines of symmetry	4.7.12 Given half of a shape and a mirror line, complete 2D symmetrical shapes using a mirror for guidance in shapes which have a diagonal or multiple lines of symmetry

Block 5

W1	4.7.13 Sketch and know the properties of equilateral, right-angle, isosceles and scalene triangles; know that right-angle triangles can be isosceles and scalene, but not equilateral	4.7.14 Sketch and know the properties of rectangles (including squares), rhombuses (including squares), parallelograms (including squares and rectangles), kites and trapezia	4.7.15 Sort triangles and rectangles into groups based on given properties	4.7.16 Sort a variety of 2D shapes (including regular and irregular pentagons, hexagons, heptagons and octagons) based on given properties	Consolidation of 4.7 Link to reasoning and problem-solving activities
W2	4.8.5 Continue increasing and decreasing sequences of decimals that count in tenths and hundredths	4.8.5 Continue increasing and decreasing sequences of decimals that count in multiples of tenths and hundredths	4.8.7 Know decimal equivalents for $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$, deriving the last two from $\frac{25}{100}$ and $\frac{75}{100}$	4.8.9 Find the whole number above and below any given decimal with 1 or 2 decimal places, and find halfway between any two consecutive whole numbers, visualising this on a number line	4.8.9 Round any decimal with 1 or 2 decimal places to the nearest whole number, visualising this on a number line
W3	4.8.10 Understand that every place in our base 10 counting system is 10 times smaller than the one to the left; understand that we can thus multiply by 10 by moving digits one place to the left and divide by 10 by moving digits one place to the right	4.8.11 Understand that every place in our base 10 counting system is 10x smaller than the one to the left; understand that we can thus multiply by 100 by moving digits two places to the left and divide by 100 by moving digits two places to the right	4.8.12 Multiply and divide a variety of numbers by 10 and 100	4.8.13 Show that formal written addition, subtraction and multiplication by 1-digit numbers can apply to decimals by aligning the appropriate digits in the calculation	4.8.13 & 4.8.14 Solve addition, subtraction and multiplication problems in the context of money, visualising using bar model
W4	4.8.15 Solve money problems that require use of fractions	4.8.16 Solve measurement problems that require use of fractions	Consolidation of 4.8 Link to reasoning and problem-solving activities	Consolidation of 4.8 Link to reasoning and problem-solving activities	4.9.1 & 4.9.5 Collect some class data in a tally chart and convert this into a frequency table
W5	4.9.2 Draw pictograms to represent given data, including halves and quarters of symbols	4.9.3 Draw bar charts to represent given data	4.9.4 Interpret bar charts, including finding differences between bars and totals from multiple bars	4.9.7 Place data into Carroll diagrams and interpret Carroll diagrams	4.9.8 Place data into common Venn diagrams with two rings and interpret Venn diagrams
W6	4.9.8 Place data into Venn diagrams with one ring entirely within another and Venn diagrams with three overlapping rings and interpret from these	4.9.9 Interpret information shown in basic pie charts including halves, thirds, quarters, fifths, sixths and eighths of the chart and estimates relating to these	4.9.9 Interpret information shown in basic pie charts including halves, thirds, quarters, fifths, sixths and eighths of the chart and estimates relating to these	Consolidation of 4.9 Link to reasoning and problem-solving activities	4.10.1 Find the perimeter of squares and rectangles given the lengths of the sides

Block 6

W1	4.10.2 Find the length of sides given the perimeter of a square, and find the length of missing sides of rectangle given the perimeter and the length of an adjacent side	4.10.3 Find the missing lengths of L shapes given enough lengths to find the missing parts	4.10.3 Find the perimeter of L shapes given enough lengths to find the missing parts	4.11.1 & 4.11.2 Use known facts to solve multiplication and division calculations	4.11.3 Use known facts to solve multiplication and division problems relating to money and measures
W2	4.11.4 & 4.11.6 Use known facts to solve multiplication and division problems relating to multi-step money and measures, visualising these using a bar model	4.11.5 Use known facts to multiply 1-digit numbers by multiples of 10, 100, 1000 and 0.1	4.11.5 Use known facts to divide multiples of 10, 100, 1000 and 0.1 by 1-digit numbers	4.11.7 & 4.11.8 Recognise that the commutative and associative laws apply to multiplication and not division; use these to solve calculations e.g. $2 \times 13 \times 5 \rightarrow 2 \times 5 \times 13 \rightarrow (2 \times 5) \times 13 \rightarrow 10 \times 13 = 130$	4.11.9 Recognise that the distributive law can be used to solve multiplication calculations that are near to 'friendly' numbers e.g. $98 \times 6 \rightarrow (100 \times 6) - (2 \times 6) \rightarrow 600 - 12 = 588$
W3	4.11.10 & 4.11.11 Recognise calculations that are equivalent due to the commutative, associative and distributive laws of mathematics e.g. $2 \times 8 \times 5 = 8 \times 2 \times 5$	4.10.5 Relate the area of a rectangle (including squares) to an array of squares, and thus use multiplication to work out the area of rectangles given the lengths of the sides	4.10.6 Find the area of L shapes and C shapes with all sides lengths labelled by dividing these into rectangles	4.10.6 Find the area of L shapes and C shapes where some sides are missing but can be calculated	4.10.7 Find the areas of irregular shapes by counting whole squares or triangles
W4	4.10.7 Find the areas of irregular shapes by counting whole squares, half squares and fractions of squares that make half or a whole square	Consolidation of 4.10 and 4.11 Link to reasoning and problem-solving activities	Consolidation of 4.10 and 4.11 Link to reasoning and problem-solving activities	Consolidation of 4.10 and 4.11 Link to reasoning and problem-solving activities	4.12.1 Choose the appropriate measurement for different lengths (km, m, cm and mm), masses (kg and g), volumes/capacities (L and mL) and time (hours, minutes and seconds)
W5	4.12.2 Convert between mm, cm, and m and solve problems that require these conversions	4.12.3 Convert between g and kg, and solve problems that require this conversion	4.12.4 Convert between mL and L, and solve problems that require this conversion	4.12.5 Convert between seconds, minutes and hours, and solve problems that require these conversions	4.12.7 & 4.12.8 Solve problems that require conversion between measures of length, mass, volume/capacity and time, visualising these in a bar model where helpful
W6	4.12.7 & 4.12.8 Solve problems that require conversion between measures of length, mass, volume/capacity and time, visualising these in a bar model	4.12.11 Compare and order measures that require conversion	4.12.9 Use rounding to estimate answers to calculations involving measures and money	4.12.10 Use estimates to check whether answers to calculations are sensible	Consolidation 4.12 Link to reasoning and problem-solving activities

Arithmetic

Fractions

Geometry

Measures & Time

Properties of number and place value

Statistics