Year 4	Term 1 – Unit 1	Term 2 – Unit 2	Term 3 – Unit 3
A: Counting, partitioning and calculating	• Recognise and continue number sequences formed by counting on or back in steps of constant size • ***Add or subtract mentally pairs of two-digit whole numbers (e.g. 47 + 58, 91 – 35)*** • ***Derive and recall multiplication facts up to 10 x 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple*** • Use knowledge of rounding, number operations and inverses to estimate and check calculations • **Ensure pupils continue to count regularly so that they become fluent in the order and place value of numbers beyond 1000; include regular practice counting in tens and hundreds** • **Ensure pupils say, read and write five digit numbers accurately and understand the use of 0 as place holder**		
	• **Read, write, order and compare numbers to at least 10,000** • **Recognise the place value of digits in five digit numbers** • **Count in multiples of 2,3,4,5,6,7,8,9,10,25,50,100,1000 from any given number and 10 or 100 less from any given number** • Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols - **including for number sequences** • **Partition, round (to nearest 10 and 100) and order five digit whole numbers; use positive and negative numbers and position them on a number line; state inequalities using the symbols < and > (e.g. −3 > −5, −1 < +1)** • **Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100, 1000 and 10,000** • **Multiply and divide numbers to 10,000 by 10 and then 100 (whole-number answers), understanding the effect; relate to scaling up or down** • Identify the doubles of two-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves • Use a calculator to carry out one-step and two-step calculations involving all four operations; recognise negative numbers in the display, correct mistaken entries and interpret the display correctly in the context of money • **Read Roman numerals to 100 and understand how Hindu-Arabic numerals included the concept of zero and place value**	• Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols • Use decimal notation for tenths and hundredths and partition decimals; relate the notation to money and measurement; position one-place and two-place decimals on a number line • **Refine and use efficient written methods to add and subtract up to 4 digit whole numbers and £.p** • **Multiply and divide numbers to 10,000 by 10 and then 100 (whole-number answers), understanding the effect; relate to scaling up or down** • ***Develop and use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g. 15 x 9, 98 ÷ 6)***	• **Solve worded problems with increasing complexity and which involve negative and increasingly large positive numbers** • Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate • **Partition, round (to nearest 10 and 100) and order five digit whole numbers; use positive and negative numbers and position them on a number line; state inequalities using the symbols < and > (e.g. −3 > −5, −1 < +1)** • Use decimal notation for tenths/hundredths and partition decimals; relate notation to money and measurement; position one-place and two-place decimals on number line • **Refine and use efficient written methods to add and subtract pairs of number up to 4 digit whole numbers and £.p** • ***Develop & use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (15 x 9, 98 ÷ 6)*** • Use a calculator to carry out one-step and two-step calculations involving all four operations; recognise negative numbers in the display, correct mistaken entries and interpret the display correctly in the context of money • **Estimate within a range, the answer to calculations and use the inverse to check**
B: Securing number facts, understanding shape	• Identify and use patterns, relationships and properties of numbers or shapes; investigate a statement involving numbers and test it with examples • Use knowledge of rounding, number operations and inverses to estimate and check calculations • Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols • ***Derive and recall multiplication facts up to 12 × 12, the corresponding division facts and multiples of numbers to 12 up to the twelfth multiple*** • Draw polygons and classify them by identifying their properties, including their line symmetry • Visualise 3-D objects from 2-D drawings; make nets of common solids		
	• Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate • Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000 • **Add and subtract numbers using formal written methods with up to four digits**	• Identify the doubles of two-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves	• Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods • Use knowledge of addition and subtraction facts and place value to derive sums and differences of pairs of multiples of 10, 100 or 1000 • Identify the doubles of two-digit numbers; use these to calculate doubles of multiples of 10 and 100 and derive the corresponding halves
C: Handling data and measures	• Suggest a line of enquiry and the strategy needed to follow it; collect, organise and interpret selected information to find answers • ***Answer a question by identifying what data to collect; organise, present, analyse and interpret the data in tables, diagrams, tally charts, pictograms and bar charts, using ICT where appropriate*** • Report solutions to puzzles and problems, giving explanations and reasoning orally and in writing, using diagrams and symbols • ***Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)*** • Interpret intervals and divisions on partially numbered scales and record readings accurately, where appropriate to the nearest tenth of a unit		
	• **Convert between different units of measure for example km to m; m to cm; cm to mm; kg to g; litre to ml; hr to min; min to second; year to month; week to day** • **Measure and calculate the perimeter of a rectilinear figure where each side is labelled in cm and m** • **Find the areas of squares and rectangles, initially by counting squares and then by using perimeter measurements to calculate; give answer as cm2 etc** • **Continue to practise finding perimeters of shapes** • **Find the areas of composite shapes** • **Read and convert between 12 hour and 24 hour time** • **Estimate, compare and calculate different measures, including money, in £ and p**	• Compare the impact of representations where scales have intervals of differing step size • **Convert between different units of measure for example km to m; m to cm; cm to mm; kg to g; litre to ml; hr to min; min to second; year to month; week to day** • **Measure and calculate the perimeter of a rectilinear figure where each side is labelled in cm and m** • **Find the areas of squares and rectangles, initially by counting squares and then by using perimeter measurements to calculate; give answer as cm2 etc** • **Continue to practise finding perimeters of shapes** • **Find the areas of composite shapes** • **Read and convert between 12 hour and 24 hour time** • **Estimate, compare and calculate different measures, including money, in £ and p**	• Compare the impact of representations where scales have intervals of differing step size • **Convert between different units of measure for example km to m; m to cm; cm to mm; kg to g; litre to ml; hr to min; min to second; year to month; week to day** • **Measure and calculate the perimeter of a rectilinear figure where each side is labelled in cm and m** • **Find the areas of squares and rectangles, initially by counting squares and then by using perimeter measurements to calculate; give answer as cm2 etc** • **Continue to practise finding perimeters of shapes** • **Find the areas of composite shapes** • **Read and convert between 12 hour and 24 hour time** • **Estimate, compare and calculate different measures, including money, in £ and p**

<table>
<tr><td rowspan="2">D: Calculating, measuring and understanding shape</td><td colspan="3">

Solve one-step and two-step problems involving numbers, money or measures, including time; choose and carry out appropriate calculations, using calculator methods where appropriate
Choose and use standard metric units and their abbreviations when estimating, measuring and recording length, weight and capacity; know the meaning of 'kilo', 'centi' and 'milli' and, where appropriate, use decimal notation to record measurements (e.g. 1.3 m or 0.6 kg)
Interpret intervals and divisions on partially numbered scales and record readings accurately, where appropriate to the nearest tenth of a unit

</td></tr>
<tr>
<td>

Add or subtract mentally pairs of increasingly large whole numbers e.g. 12,462 – 2,400
Read time to the nearest minute; use am, pm and 12-hour clock notation; choose units of time to measure time intervals; calculate time intervals from clocks and timetables
Recognise horizontal and vertical lines; use the eight compass points to describe direction; describe and identify the position of a square on a grid of squares
Identify lines of symmetry in 2D shapes presented in different orientations
Compare and classify geometric shapes, including squares, rectangles and triangles based on their properties and size; including congruency
Identify acute and obtuse angles and compare the size of different angles
Describe positions and movements between positions on a 2D grid and as coordinates in the first quadrant
Plot specified points and draw sides to complete a given polygon
Recognise a symmetric figure and complete a symmetric figure with respect to a specific line of symmetry

</td>
<td>

Refine and use efficient written methods to add and subtract pairs of up to 4 digit whole numbers and £.p
Derive and recall multiplication facts up to 12 x 12, the corresponding division facts and multiples of numbers to 12 up to the twelfth multiple
Develop and use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g. 15 x 9, 98 ÷ 6)
Use decimal notation for tenths and hundredths and partition decimals; relate the notation to money and measurement; position one-place and two-place decimals on number line
Draw rectangles and measure and calculate their perimeters; find the area of rectilinear shapes drawn on a square grid by counting squares
Know that angles are measured in degrees and that one whole turn is 360°; compare and order angles less than 180°; identify acute and obtuse angles; use a protractor to measure angles
Recognise horizontal and vertical lines; use the eight compass points to describe direction; describe and identify the position of a square on a grid of squares
Compare and classify geometric shapes, including squares, different types of rectangles and different types of triangles based on their properties and size; including congruency
Use a protractor to measure angles up to 180 degrees
Ensure that children continue to use a compass to draw circles and use the related vocab (from year 3)
Describe positions and movements between positions on a 2D grid and as coordinates in the first quadrant
Plot specified points and draw sides to complete a given polygon
Recognise a symmetric figure and complete a symmetric figure with respect to a specific line of symmetry

</td>
<td>

Refine and use efficient written methods to add and subtract pairs of up to 4 digit whole numbers and £.p
Use decimal notation for tenths and hundredths and partition decimals; relate the notation to money and measurement; position one-place and two-place decimals on a number line
Read time to the nearest minute; use am, pm and 12-hour clock notation; choose units of time to measure time intervals; calculate time intervals from clocks and timetables
Draw rectangles and measure and calculate their perimeters; find the area of rectilinear shapes drawn on a square grid by counting squares
Compare and classify geometric shapes, including squares, different types of rectangles and different types of triangles based on their properties and size; including congruency
Ensure that children continue to use a compass to draw circles and use the related vocab (from year 3)
Know that angles are measured in degrees and that one whole turn is 360°; compare and order angles less than 180°; identify acute and obtuse angles; use a protractor to measure angles
Describe positions and movements between positions on a 2D grid and as coordinates in the first quadrant
Plot specified points and draw sides to complete a given polygon
Recognise a symmetric figure and complete a symmetric figure with respect to a specific line of symmetry
Ensure pupils regularly practise recognising line symmetry in a variety of diagrams. Extend to rotational symmetry

</td>
</tr>
<tr><td rowspan="2">E: Securing number facts, calculations and relationships</td><td colspan="3">

Represent a puzzle or problem using number sentences, statements or diagrams; use these to solve the problem; present and interpret the solution in the context of the problem
Derive and recall multiplication facts up to 10 x 10, the corresponding division facts and multiples of numbers to 10 up to the tenth multiple
Recognise the equivalence between decimal and fraction forms of one half, quarters, tenths and hundredths
Use diagrams to identify equivalent fractions (e.g. $^{6}/_{8}$ and $^{3}/_{4}$, or $^{79}/_{100}$ and $^{7}/_{10}$); interpret mixed numbers and position them on a number line (e.g. $3^{1}/_{2}$)
Find fractions of numbers, quantities or shapes (e.g. $^{1}/_{5}$ of 30 plums, $^{3}/_{8}$ of a 6 by 4 rectangle)
Ensure pupils continue practising formal written methods and mental methods with increasingly large numbers and include the vocabulary 'sum' and 'difference'
Include increasingly large numbers in mental calculation e.g. 12,462 – 2,400 or 12,462 + 600
Ensure pupils say and write numbers correctly so that they are clear about place value and confident when working with mental calculation
Recall multiplication and division facts up to 12 x 12 and including x by 0 and by 1

</td></tr>
<tr>
<td>

Identify pairs of fractions that total 1
Ensure pupils practise recalling and using x tables and division tables until they are confident in using them
Recognise and use factor pairs within 144
Solve worded problems using all 4 operations
Compare numbers with the same number of decimal places to 2DP (2 decimal places or up to 1/100ths)
Find the effect of dividing a 2 digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths and thousandths (see mental calcs strategy pack)
Recognise, know and write decimal equivalents of 1/4 , 1/5, 1/2 , ¾ and any number of tenths

</td>
<td>

Identify pairs of fractions that total 1
Identify and name equivalent fractions of a given fraction with denominator not greater than 12
Write an equivalent fraction given the denominator or numerator
Be able to reduce fractions to their simplest form
Add and subtract two fractions with common denominators
Multiply or divide 2 and 3 digit numbers by a 1 digit number using formal written methods and interpret remainders appropriately as integers
Compare numbers with the same number of decimal places to 2DP (2 decimal places or up to 1/100ths)
Find the effect of dividing a 2 digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths and thousandths (see mental calcs strategy pack)
Recognise, know and write decimal equivalents of 1/4 , 1/5, 1/2 , ¾ and any number of tenths

</td>
<td>

Develop & use written methods to record, support and explain multiplication and division of two-digit numbers by a one-digit number, including division with remainders (e.g. 15 x 9, 98 ÷ 6)
Use the vocabulary of ratio and proportion to describe the relationship between two quantities (e.g. 'There are 2 red beads to every 3 blue beads, or 2 beads in every 5 beads are red'); estimate a proportion (e.g. 'About one quarter of the apples in the box are green')
Multiply or divide 2 and 3 digit numbers by a 1 digit number using formal written methods and interpret remainders appropriately as integers
Ensure pupils continue to practise mental methods and extend this to 3 digit numbers to derive facts, e.g. 300 x 2 = 600 into 600 / 3 = 200. Pupils should also understand distributive law to derive facts, e.g. 30 x 7 + 9 x 7 = 39 x 7
Compare numbers with the same number of decimal places to 2DP (2 decimal places or up to 1/100ths)
Find the effect of dividing a 2 digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths and thousandths (see mental calcs strategy pack)
Recognise, know and write decimal equivalents of 1/4 , 1/5, 1/2 , ¾ and any number of tenths

</td>
</tr>
</table>