



Forton Primary School
Mathematics Overview – Clougha (Year 3 & 4)

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	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2	
	Year 3	Year 4	Year 3	Year 4	Year 3	Year 4	Year 3	Year 4	Year 3	Year 4	Year 3	Year 4
Week 1	Place Value, Addition & Subtraction Unit 1	Place Value, Addition & Subtraction Unit 1	Multiplication tables (3x and 4x) Unit 5	Multiplication Unit 5	Place Value, Addition & Subtraction Unit 10	Place Value Unit 9	Volume, Capacity & Mass Unit 14	Measures Unit 19	Decimal Place Value Unit 23	Place Value Unit 20	Place Value Unit 25	Place Value Unit 27
Week 2			Multiplication Unit 6				2D Shape Unit 15	2D Shape & Sorting Unit 15	Addition & Subtraction Unit 20	Addition & Subtraction Unit 21	Fractions Unit 27	Fractions Unit 24
Week 3	Length & Perimeter Unit 2	Length & Perimeter Unit 2	Division Unit 7	Division Unit 6	Multiplication Unit 11	Multiplication Unit 10	Fractions Unit 17	Addition, Subtraction & Money Unit 14			Time Unit 19	
Week 4	Statistics Unit 3	Statistics Unit 3	Time Unit 8	Time Unit 7								
Week 5	Addition & Subtraction Unit 4	Addition & Subtraction Unit 4	3D Shape Unit 9	3D Shape Unit 8	Division Unit 13	Division Unit 11	Position & Direction Unit 18	Position & Direction Unit 16			Statistics Unit 28	Statistics Unit 26
Week 6			Assess & Review	Assess & Review	Fractions Unit 12	Fractions Unit 13	Calculation Unit 26	Area Unit 17 & 23	Time Unit 29	Assess & Review	Assess & Review	Assess & Review
Week 7					Addition, Subtraction & Statistics Unit 16	Addition & Subtraction Unit 12 Statistics Unit 18						



Clougha – Year 3 & 4

Autumn Term 1

Place Value, Addition and Subtraction

	Starter ideas	Year 3 focus – Place Value, Addition and Subtraction Unit 1	Year 4 focus – Place Value, Addition and Subtraction Unit 1
Lesson 1	Count on and back in ones and tens from any two-digit number. Count on and back in ones, tens and hundreds from any number up three-digits.	Exchange 10 ones for 1 ten and vice versa. Exchange 10 tens for 1 hundred and vice versa.	Exchange 10 tens for 1 hundred and vice versa using base 10 equipment. Exchange 10 hundreds for 1 thousand and vice versa using place value counters.
Lesson 2	Count on in tens from any two-digit number (crossing the 100 boundary). Count on in tens from any two- or three-digit number (crossing the 100 boundaries).	Identify and represent numbers up to 1000 using concrete materials such as base 10 apparatus. Partition a three-digit number into hundreds, tens and ones.	Identify and represent numbers up to 10,000 using concrete materials such as base 10 apparatus and place value counters. Partition a four-digit number into thousands, hundreds, tens and ones.
Lesson 3	Count back in tens from any two-digit number (crossing the 100 boundary). Count back in tens from any two- or three-digit number (crossing the 100 boundaries).	Identify and represent numbers up to 1000 using models such as place value counters and arrow cards. Partition a three-digit number into hundreds, tens and ones.	Identify and represent numbers with one decimal place using models such as place value counters and arrow cards. Partition a number with one decimal place into tens, ones and tenths including in different ways (revisit of Y3 learning).
Lesson 4	Match multiplication number sentences to arrays and vice-versa. Match multiplication number sentences to arrays and vice-versa.	Compare three or more numbers up to 1000 when represented using the same concrete materials saying which numbers are greater or less and use $<$, $>$ and $=$ correctly.	Compare two numbers and order three or more numbers up to 10 000 and numbers with one decimal place when represented using the same concrete materials saying which numbers are greater or less and use $<$, $>$ and $=$ correctly.
Lesson 5	Exchanging tens for hundreds and hundreds for tens. Exchanging tens for hundreds and hundreds for thousands and vice versa.	Identify the multiples of 10 immediately before and after numbers with up to three-digits and round the numbers to the nearest ten.	Identify the multiples of 10 and 100 immediately before and after numbers with up to four-digits and round the numbers to the nearest ten and hundred.
Lesson 6	Count on or back from a two- or three- digit number in ones, crossing a tens boundary. Identify the number 1, 10 or 100 more/less than a given number with up to three-digits without crossing any boundaries.	Identify the number ten more/ten less and one hundred more/one hundred less than a given number with up to three-digits without crossing any boundaries.	Identify the number 1, 10, 100 or 1,000 more or less than a given number with up to four-digits recognising which digits stay the same and which digits change.
Lesson 7	Identify multiples of 100 on a number line with multiples of 100 marked but not labelled.	Add and subtract a three-digit number and tens mentally with no boundaries crossed.	Recognise calculations that require counting on or back mentally e.g. $243 + 230$ (counting on in hundreds and then in tens) and use this strategy where appropriate.



	Identify the number 1,10, 100 or 1000 more or less than a given number with up to four digits.		
Lesson 8	<p>Add and subtract a three-digit number and hundreds mentally with no boundaries crossed.</p> <p>Recognise and solve calculations that involve known or related facts.</p>	<p>Identify and describe the rule (addition or subtraction) in a number sequence by calculating the difference between two adjacent numbers.</p> <p>Extend number sequences by using the identified rule.</p>	<p>From given complete sequences, identify whether they have a constant step size or not.</p>
Lesson 9	<p>Recall multiplication and division facts for the 2, 5 and 10 multiplication tables.</p> <p>Recall multiplication and division facts for the 2, 3,4, 5, 8 and 10 multiplication tables.</p>	<p>Recognise addition calculations that require mental partitioning e.g. $37 + 25$ and use this strategy where appropriate.</p>	<p>Recognise addition calculations that require mental partitioning e.g. $765 + 231$ (no boundaries crossed), $87 + 35$ (boundaries crossed) and use this strategy where appropriate.</p>
Lesson 10	<p>Identify and describe 2-D shapes, considering sides, vertices and symmetry.</p> <p>Identify and describe 2-D shapes (sides, parallel and perpendicular sides, vertices, right angles and symmetry).</p>	<p>Recognise subtraction calculations that require mental partitioning e.g. $42 - 17$ and use this strategy where appropriate.</p>	<p>Recognise subtraction calculations that require mental partitioning e.g. $765 - 241$ (no boundaries crossed), $122 - 35$ (boundaries crossed) and use this strategy where appropriate.</p>



Length and Perimeter

	Starter ideas	Year 3 focus – Length and Perimeter Unit 2	Year 4 focus – Length and Perimeter Unit 2
Lesson 1	<p>Recall multiplication and division facts for the 2, 5 and 10 multiplication tables.</p> <p>Correctly place multiples of 100 on a marked, but not labelled, number line with multiples of 1000 marked.</p>	<p>Accurately draw 2-D shapes including with specific properties using squared and isometric paper.</p>	<p>Measure and draw lengths as properties of 2-D shapes e.g. a triangle with one side of 82 mm.</p>
Lesson 2	<p>Recall pairs of multiples of 100 that make 1000.</p> <p>Compare different lengths (km, m, cm, mm).</p>	<p>Measure lengths in cm and m.</p> <p>Add and subtract, including finding the difference between lengths.</p>	<p>Measure lengths in cm and mm, including cm as decimals with one decimal place e.g. 12mm and 1.2cm.</p> <p>Compare the length of different objects including numbers to one decimal place.</p>
Lesson 3	<p>Compare the lengths of different objects.</p> <p>Recall multiplication and division facts for the 3 and 6 multiplication tables.</p>	<p>Measure lengths in mm.</p> <p>Add and subtract, including finding the difference between length.</p>	<p>Add and subtract, including finding the difference between lengths.</p>
Lesson 4	<p>Use a mental partitioning strategy for addition of 2 two-digit numbers.</p> <p>Use a mental partitioning strategy for addition of 2 two- and three-digit numbers.</p>	<p>Develop an understanding of perimeter using straws.</p> <p>Use counting to calculate the perimeter of a polygon drawn on squared cm paper.</p>	<p>Measure and calculate the perimeter of any rectilinear figure where all the side lengths are given.</p> <p>Recognise where sides are the same length in oblong rectangles and square rectangles and use this when measuring and calculating perimeter.</p>
Lesson 5	<p>Use a mental partitioning strategy for subtraction of 2 two-digit numbers.</p> <p>Use a mental partitioning strategy for subtraction of 2 two- and three-digit numbers.</p>	<p>Use counting to calculate the perimeter of a polygon drawn on squared cm paper.</p> <p>Calculate the perimeter of a polygon where the lengths of sides are given.</p>	<p>Recognise where the sides are the same length in L and T shaped rectilinear figures and use this when measuring and calculating perimeter.</p> <p>Calculate the length of missing sides using known dimensions.</p>



Statistics

	Starter ideas	Year 3 focus – Statistics Unit 3	Year 4 focus – Statistics Unit 3
Lesson 1	<p>Add 3 one-digit numbers.</p> <p>Use Venn diagrams with two intersecting sets to compare and sort objects, numbers and shapes.</p>	<p>Derive and use addition and subtraction facts for 100 using bead strings, a blank 10 by 10 grid etc.</p> <p>Recognise that when calculating addition facts to 100 the 1s total 10 and the tens total 90.</p>	<p>Derive and use addition and subtraction facts for 1 using number lines, bar models and related facts.</p> <p>Derive and use addition and subtraction facts for 10 for numbers with one decimal place using number lines, bar models and related facts.</p> <p>Recognise that when calculating addition facts to 10 the tenths total 1 and the ones total 9.</p>
Lesson 2	<p>Add or subtract a three-digit number and: -ones -tens -hundreds</p> <p>Count in multiples of 25 from 0 or any multiple of 25.</p>	<p>Collect data in a frequency table and use the data to draw a bar chart with a scale in ones.</p>	<p>Present discrete data using bar charts and a scale appropriate to Year 4 counting and place value.</p> <p>Choose the appropriate scale when representing data in a bar chart.</p>
Lesson 3	<p>Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers.</p> <p>Add and subtract a whole number to/from a number with one decimal place e.g. $6.3 + 4$.</p>	<p>Use data in a frequency table to draw a bar chart with a scale in twos.</p> <p>Answer questions using data contained in a bar chart.</p>	<p>Interpret data and solve one-step questions (for example, ‘How many more?’ and ‘How many fewer?’) using information presented in a bar chart or table.</p>
Lesson 4	<p>Adding 3 two-digit multiples of 10.</p> <p>Recall multiplication and division facts for the 2, 4 and 8 multiplication tables.</p>	<p>Solve one-step questions (for example, ‘How many more?’ and ‘How many fewer?’) using information presented in a bar chart or table.</p>	<p>Interpret data and solve one-step questions (for example, ‘How many more?’ and ‘How many fewer?’) using information presented in a bar chart or table.</p>
Lesson 5	<p>Derive addition and subtraction facts for 100 using number lines.</p> <p>Recall multiplication and division facts for the 2, 3, 4, 5, 6 and 8 multiplication tables.</p>	<p>Present and interpret data using pictograms with a symbol representing 1, 2 or 10 (including half symbols).</p> <p>Solve one-step questions (for example, ‘How many more?’ and ‘How many fewer?’) using information presented in a pictogram.</p>	<p>Present and interpret data using pictograms with a symbols representing numbers appropriate for Year 4 (including half symbols).</p> <p>Solve one-step questions (for example, ‘How many more/fewer?’) using information presented in a pictogram.</p>



Addition and Subtraction

	Starter ideas	Year 3 focus – Addition and Subtraction Unit 4	Year 4 focus – Addition and Subtraction Unit 4
Lesson 1	Exchanging ones for tens and tens for ones. Partition a four-digit number represented using place value counters into thousands, hundreds, tens and ones in different ways.	Add 2 two-digit numbers using formal written methods with exchange from ones into tens.	Add two numbers with four digits using formal written methods of columnar addition with exchange. Use appropriate rounding to estimate the answer to a calculation.
Lesson 2	Addition of 2 three-digit numbers where no boundaries are crossed, e.g. $265 + 324$. Addition of 2 four-digit numbers where no boundaries are crossed, e.g. $1265 + 2324$.	Add 2 three-digit numbers using formal written methods with exchange from ones into tens.	Identify missing digits in columnar addition calculations.
Lesson 3	Round numbers with up to three-digits to the nearest 10. Find unit and non-unit fractions of amounts.	Add 2 three-digit numbers using formal written methods with exchange from ones into tens.	Add three numbers with four digits using formal written methods of columnar addition with exchange.
Lesson 4	Recall pairs of multiples of 100 that make 1000. Recall pairs of multiples of 1000 that make 10,000. Derive pairs of multiples of 100 that total 10 000.	Choose an appropriate strategy for a given addition calculation.	Choose an appropriate strategy for a given addition calculation.
Lesson 5	Identifying the bond to the next multiple of 10, e.g. $231 + \quad = 240$. Identifying the bond to the next multiple of 1000, e.g. $2310 + \quad = 3000$.	Subtract 2 two-digit numbers using formal written methods with exchange from tens into ones.	Subtract two numbers with four digits using formal written methods of columnar subtraction with exchange. Use appropriate rounding to estimate the answer to a calculation.
Lesson 6	Subtraction of 2 three-digit numbers where no boundaries are crossed, e.g. $765 - 342$. Subtraction of 2 four-digit numbers where no boundaries are crossed, e.g. $4765 - 2342$.	Subtract 2 three-digit numbers using formal written methods with exchange from tens into ones.	Subtract two numbers with four digits using formal written methods of columnar subtraction with exchange where the greater number has 0 as a place holder e.g. $3805 - 2588$. Use appropriate rounding to estimate the answer to a calculation.
Lesson 7	Identifying missing numbers in multiplication and division number sentences (2, 5 and 10 multiplication tables). Identifying missing numbers in multiplication and division number sentences (2, 3, 4, 5, 6, 8 and 10 multiplication tables).	Subtract 2 three-digit numbers using formal written methods with exchange from tens into ones.	Identify missing digits in columnar subtraction calculations.
Lesson 8	Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers.	Choose an appropriate strategy for a given subtraction calculation.	Choose an appropriate strategy for a given subtraction calculation.



	Use a mental partitioning strategy for addition or subtraction of 2 two- and three-digit numbers.		
Lesson 9	Use related facts to add 3 three-digit multiples of 100 (not crossing the thousand boundary). Use related facts to add 3 four-digit multiples of 1000 (not crossing the ten thousand boundary).	Use a formal written method of addition to make a given criteria, e.g. choose from a set of given numbers to make a total. Use a formal written method of subtraction to make a given criteria, e.g. choose from a set of given numbers to make a difference.	Solve problems involving addition and subtraction such as use a formal written method of addition/subtraction to make a given criteria, e.g. choose from a set of given numbers to make a total. Represent and solve a problem using structured pictorial representations such as the bar model.
Lesson 10		Learning check.	Learning check.



Autumn Term 2

Multiplication

	Starter ideas	Year 3 focus – Multiplication tables (3x and 4x) Unit 5 Multiplication Unit 6	Year 4 focus – Multiplication Unit 5
Lesson 1	Count on and back in ones and tens from any two-digit number (crossing the 100 boundary).	Use arrays to understand the multiplication facts for the 3 and 4 multiplication tables (including commutativity).	Use arrays to understand the multiplication facts for the 11 and 9 multiplication tables (including commutativity). Identify relationships within a multiplication square. Derive the 11 and 9 multiplication tables from the 10 multiplication table by using 10 groups add/subtract 1 group strategy.
Lesson 2	Match multiplication number sentences to arrays and vice-versa. Count in multiples of 25 from 0 or any multiple of 25.	Understand the relationship between arrays and repeated addition. Represent multiplication as repeated addition on a number line.	Use arrays to identify what the term 'factor' means. Use arrays to identify all the factor pairs of a given number.
Lesson 3	Recall and derive multiplication facts for the 3 and 4 multiplication tables using a multiplication square. Recall and derive multiplication facts for the 11 and 9 multiplication tables using a multiplication square.	Derive facts from the 3 and 4 multiplication tables using known facts from the 1, 2, 5 and 10 multiplication tables.	Recognise that multiplying by 0 gives a product of 0 and that multiplying by 1 does not change the number. Understand the effect of multiplying a one- or two-digit number by 10 and 100. Recognise the relationship between a known fact and a related calculation, e.g. $6 \times 9 = 54$ and $600 \times 9 = 5400$.
Lesson 4	Count on and back in tens and hundreds. Count on and back in multiples of 1000 from 0 or any multiple of 1000.	Extend number sequences by using an identified rule (counting in 3s, 4s, 10s and 100s).	Use compensation to multiply T9 by a one-digit number.
Lesson 5	Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers. Recall multiplication facts for the 6, 8, 9 and 11 multiplication tables.	Use single Venn and one criterion Carroll diagrams to compare and sort numbers.	Use partitioning to mentally multiply $TU \times U$.
Lesson 6	Recall pairs of multiples of 100 that make 1000. Derive and use addition and subtraction facts for 1 with decimal numbers to one decimal place.	Use partitioning to derive doubles of all numbers to 50.	Use partitioning to double any number up to 4 digits (with an answer less than 10,000).
Lesson 7	Using known multiplication facts (1, 2, 5 and 10 multiplication tables) to calculate unknown multiplication facts.	Use an array to represent a tens number multiplied by a single digit number and partition the array into tens and ones to support calculating the product.	Use partitioning to calculate a $1TU \times U$ using the grid method.



	Use related facts to double a number of tenths e.g. double 0.7.		
Lesson 8	Count on and back in ones and tens from any two-digit number (crossing the 100 boundary). Find 0.1 more or less than a given number including where the ones digit changes.	Use partitioning to calculate a teens number multiplied by a single digit number (grid method).	Use partitioning to calculate a $1TU \times U$ using the grid method.
Lesson 9	Recall/derive multiplication facts for the 2, 3, 4, 5 and 10 multiplication tables. Recall multiplication facts for the 2, 3, 4, 5, 6, 8, 9, 10 and 11 multiplication tables.	Use partitioning to calculate a teens number multiplied by a single digit number.	Choose an appropriate strategy to solve a calculation based upon the numbers involved.
Lesson 10	Compare and order numbers with up to three digits. Compare numbers with up to four digits and numbers with one decimal place.	To solve problems involving multiplication.	To solve problems involving multiplication including in measurement contexts.



Division

	Starter ideas	Year 3 focus – Division Unit 7	Year 4 focus – Division Unit 6
Lesson 1	<p>Derive addition and subtraction facts for 100 using number lines.</p> <p>Recall and use addition and subtraction facts for 100.</p>	Understand division as sharing and grouping.	Use knowledge of place value and multiplication facts to divide related greater numbers e.g. $540 \div 6$.
Lesson 2	<p>Recall/derive multiplication facts for the 2, 3, 4, 5 and 10 multiplication tables.</p> <p>Recall division facts for the 6, 8, 9 and 11 multiplication tables.</p>	Use concrete or pictorial representations to derive the division facts related to the multiplication facts that they know.	Divide two digit numbers (beyond the multiplication facts) by a single digit number using the chunking method where there is no remainder.
Lesson 3	<p>Round numbers with up to three-digits to the nearest 10.</p> <p>Identify and describe the properties of 2-D shapes.</p>	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know.	Divide two digit numbers (beyond the multiplication facts) by a single digit number using the chunking method where there is a remainder.
Lesson 4	<p>Know the number of days in each month.</p> <p>Recall key conversions of time including 60 seconds = 1 minute, 60 minutes = 1 hour, 24 hours = 1 day and 7 days = 1 week and vice versa.</p>	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know using greater multiples of the divisor.	<p>Recognise that dividing a number by 1 does not change the number.</p> <p>Use concrete materials to model and describe the effect of dividing a 2-digit number by 10.</p>
Lesson 5	<p>Derive doubles of multiples of 100 to 500, e.g. double 200.</p> <p>Use partitioning to double any number up to 4 digits (with an answer less than 10,000).</p>	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know including those that have a remainder.	Solve problems involving division including interpreting remainders in a given context.



Time

	Starter ideas	Year 3 focus – Time Unit 8	Year 4 focus – Time Unit 7
Lesson 1	<p>Use number lines to derive pairs of numbers that total 60.</p> <p>Correctly place multiples of one tenth (0.1) on an unmarked number line (with start and end labelled 0 and 1).</p>	<p>Tell and write time on an analogue clock to o'clock, quarter past (15 minutes past), half past (30 minutes past) and quarter to (15 minutes to).</p> <p>Tell and write the time on an analogue clock to 5 minutes –past and to.</p>	<p>Tell and write the time on an analogue clock to the nearest minute – past and to.</p>
Lesson 2	<p>Identifying the bond to the next multiple of 10, e.g. $231 + \quad = 240$.</p> <p>Find 0.1, 1, 10, 100 and 1000 more or less than a given number.</p>	<p>Tell and write the time on an analogue clock to 5 minutes–past and to.</p>	<p>Tell, write and match analogue and digital times (12-hourclock).</p>
Lesson 3	<p>Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers.</p> <p>Recognise addition calculations that require mental partitioning e.g. $765 + 231$ (no boundaries crossed), $87 + 35$ (boundaries crossed) and use this strategy where appropriate.</p>	<p>Tell and write the time on an analogue clock to the nearest minute – past.</p>	<p>Know that 24-hour clock times are written using four digits. Understand how times on a digital 24-hour clock are before or after midday.</p> <p>Calculate the analogue time from a given 24-hour clock time when the hour value is greater than 12.</p>
Lesson 4	<p>Doubling a two-digit number where the total is less than 100.</p> <p>Recall division facts for the 2, 3, 4, 5, 6, 8, 9, 10 and 11 multiplication tables.</p>	<p>Tell and write the time on an analogue clock to the nearest minute – to.</p>	<p>Tell the time on a 24-hour clock, e.g. 16:27 is 27 minutes past 4 in the afternoon.</p>
Lesson 5	<p>Adding 3 two-digit multiples of 10.</p> <p>Round numbers with up to four-digits to the nearest 10 and 100.</p>	<p>Know that there are 60 seconds in a minute.</p> <p>Record time in seconds and minutes.</p> <p>Compare two time intervals which are in the same unit.</p>	<p>Solve problems involving converting between different units of time.</p>



3D Shape

	Starter ideas	Year 3 focus – 3D Shape Unit 9	Year 4 focus – 3D Shape Unit 8
Lesson 1	Adding 3 three-digit multiples of 100. Count on and back in fractional steps.	Identify and describe the properties of 3-D shapes, including the number of edges, faces and vertices.	Identify, name and describe 2-D shapes according to the properties of their sides and vertices.
Lesson 2	Addition of 2 three-digit numbers where no boundaries are crossed, e.g. 265 + 324. Recall multiplication and division facts for the 2, 3, 4, 5, 6, 8, 9, 10 and 11 multiplication tables.	Use construction materials such as Clix or Polydron to make 3-D shapes.	Identify and name different prisms according to their properties. Describe the properties of prisms: faces – number, shape and where any are congruent (identical); number of edges and where any are of equal length; number of vertices.
Lesson 3	Round numbers with up to three-digits to the nearest 10. Identify families of equivalent fractions using fraction walls.	Make the skeletons of 3-D shapes using straws and Playdoh.	Identify and name different pyramids according to their properties. Describe the properties of pyramids: faces – number, shape and where any are congruent (identical); number of edges and where any are of equal length; number of vertices.
Lesson 4	Recall and derive addition and subtraction facts for 100 with multiples of 5. Recall key conversions of distance including 10mm = 1cm, 100cm = 1m, 1000m = 1km and vice versa.	Identify horizontal and vertical lines.	Identify and describe the properties of 3-D shapes: faces – number, shape and where any are congruent (identical); number of edges and where any are of equal length; number of vertices.
Lesson 5	Count in steps of 50. Compare and order unit fractions and fractions with the same denominators.	Use single Venn and one criterion Carroll diagrams to compare and sort 3-D shapes.	Use Venn and Carroll diagrams to compare and sort 3-D shapes.



Spring Term 1

Place value, addition and subtraction

	Starter ideas	Year 3 focus – Place value, addition and subtraction Unit 10	Year 4 focus – Place Value Unit 9
Lesson 1	<p>Correctly place multiples of 10 on a 0 – 1000 number line with multiples of 100 marked but not labelled.</p> <p>Use a mental partitioning strategy to add a two-digit number to another two-or three-digit number crossing the hundreds boundary.</p>	<p>Identify the multiples of 100 immediately before and after a given number</p> <p>Round numbers with up to three-digits to the nearest hundred, e.g. 356 rounds to 400.</p>	<p>Identify the multiples of 1000 immediately before and after a given number.</p> <p>Round numbers with up to four digits to the nearest thousand.</p>
Lesson 2	<p>Convert between cm and mm and vice versa</p> <p>Convert between cm and m and vice versa.</p> <p>Order numbers with different numbers of digits up to 10,000.</p>	<p>Add a number up to three-digits and tens where the tens and hundreds digit changes, e.g. ten more than 397.</p> <p>Add a number up to three-digits and ones where the ones, tens and hundreds digit changes, e.g. one more than 499.</p>	<p>Correctly place any number on a number line with multiples of 1000 marked but not labelled.</p> <p>Correctly place any number on a number line with multiples of 1000 marked but not labelled with a variety of start and end points.</p>
Lesson 3	<p>Count in steps of 8 from zero.</p> <p>Multiply T9 by a one-digit number.</p>	<p>Subtract a number up to three-digits and tens where the tens and hundreds digit changes, e.g. ten less than 407.</p> <p>Subtract a number up to three-digits and ones where the ones, tens and hundreds digit changes, e.g. one less than 500.</p>	<p>Label positive and negative numbers on a demarcated number line.</p> <p>Place temperatures including negative numbers on a number line.</p> <p>Count backwards through zero to include negative numbers.</p>
Lesson 4	<p>Recall/derive multiplication facts for the 2, 3, 4, 5 and 10 multiplication tables.</p> <p>Partition numbers with one decimal place without the use of practical equipment into two groups where one group is a multiple of 1 in different ways.</p>	<p>Recognise addition calculations that require mental compensation e.g. $129 + 49$ and use this strategy where appropriate.</p>	<p>Make a number with 2 decimal places using straws and place value counters.</p> <p>Use pictorial representations such as a 10 x 10 grid to show that $1/100$ of an object can be found by dividing the object into one hundred equal parts.</p> <p>Understand the hundredths heading in place value columns represents a given number of fractional hundredths, e.g. $3/100$ is equal to 0.03.</p> <p>Recognise and write decimal equivalents for any number of hundredths less than $10/100$ e.g. $7/100$ is 0.07.</p> <p>Identify the value of each digit to two decimal places in a variety of ways.</p>
Lesson 5	<p>Identifying the bond to the next multiple of 100, e.g. $231 + \quad = 300$.</p> <p>Use a counting on strategy to calculate a difference.</p>	<p>Recognise subtraction calculations that require mental compensation e.g. $175 - 39$ and use this strategy where appropriate.</p>	<p>Use pictorial representations such as a 10×10 grid (and number lines) to recognise that $1/100$ of an object can be found by dividing $1/10$ of the object into ten equal parts.</p> <p>Recognise that $10/100$ is equivalent to $1/10$ or 0.1.</p> <p>Recognise that $20/100$ is equivalent to $2/10$ or 0.2 and so on.</p> <p>Write any number of hundredths in fraction and decimal form.</p>



Place value, addition and subtraction

	Starter ideas	Year 3 focus – Place value, addition and subtraction Learning check	Year 4 focus – Place value Unit 9
Lesson 1	Use knowledge of place value and multiplication facts to divide related greater numbers, e.g. $630 \div 9 = 70$.		Recognise how place value columns relate to money notation i.e. units/ones column relates to the number of £1 coins; tenths column relates to the number of equivalent 10p coins; hundredths column relates to the number of equivalent 1p coins. Recognise that one hundred 1p coins equal £1. Recognise that each 1p coin is $\frac{1}{100}$ of £1, hence 1p being written as £0.01 which is consistent with the columns in a place value chart.
Lesson 2	Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers.		Make a number with 2 decimal places using place value counters and coins (£1, 10p and 1p). Understand how a number with 2 decimal places can be represented in different ways, e.g. 0.27 can be $\frac{27}{100}$ or $\frac{2}{10}$ and $\frac{7}{100}$.
Lesson 3	Identify and describe properties of 2-D shapes.		Compare two or more numbers with ones, tenths and hundredths using concrete materials. Order two or more numbers with ones, tenths and hundredths using concrete materials.
Lesson 4	Double any four-digit number.		Correctly place multiples of 0.01 on a number line with multiples of 0.1 marked but not labelled.
Lesson 5	Read the time using analogue clocks.		Use concrete materials to model effect of dividing a one-digit or two-digit number by 100. Describe the effect of dividing a one-digit or two-digit number by 100.



Multiplication

	Starter ideas	Year 3 focus – Multiplication Unit 11	Year 4 focus – Multiplication Unit 10
Lesson 1	<p>Derive doubles of multiples of 50 to 500, e.g. double 150.</p> <p>Round numbers with up to four digits to the nearest thousand, e.g. 3567 rounds to 4000.</p>	Use partitioning to derive doubles of all numbers to 100.	<p>Recall and use multiplication and division facts for the 7 multiplication table.</p> <p>Recall and use multiplication and division facts for the 12 multiplication table.</p>
Lesson 2	<p>Recall addition and subtraction facts for 100 (multiples of 5 and 10).</p> <p>Count on and back in steps of 7 and 9.</p>	<p>Use arrays to understand the multiplication and division facts for the 8 multiplication table.</p> <p>Derive the 8 multiplication table from the 4 multiplication table.</p>	<p>Identify and describe the rule in a number sequence by calculating the difference between two adjacent numbers.</p> <p>Extend number sequences by using the identified rule.</p> <p>Identify and describe the rule in a number sequence by calculating the step size between non-adjacent numbers in the sequence, including counting steps to complement tables facts as well as other steps e.g. 3, _ _ _ 31.</p>
Lesson 3	<p>Find 1, 10 or 100 more or less than a given number including crossing boundaries.</p> <p>Identify and describe properties of 3-D shape.</p>	Use Venn and Carroll diagrams to compare and sort numbers.	Use partitioning to double a number with ones and tenths, e.g. double 6.8.
Lesson 4	<p>Partition a three-digit number (represented using base 10 apparatus) into hundreds, tens and ones in different ways, e.g. 643 is 5 hundreds (500), 14 tens (140) and 3 ones (3).</p> <p>Count on and back in fractional hundredths.</p>	<p>Use concrete materials to model the effect of multiplying a two-digit number by 10.</p> <p>Describe the effect of multiplying a two-digit number by ten.</p>	<p>Identify factor pairs of a given number within the multiplication tables that they know.</p> <p>Use appropriate factor pairs and commutativity in mental calculations, e.g. $300 \times 6 = 3 \times 100 \times 6$ which becomes $3 \times 6 \times 100 = 18 \times 100$.</p>
Lesson 5	<p>Addition or subtraction of 2 three-digit numbers where no boundaries are crossed, e.g. $265 + 324$.</p> <p>Count on and back in decimal hundredths.</p>	Multiply a multiple of 10 by a one-digit number, e.g. 60×4 .	<p>Use partitioning to calculate a three-digit number multiplied by a single digit number using grid method.</p> <p>Estimate multiplication by rounding to the nearest multiple of 10 or 100 and using related facts, e.g. $384 \times 6 \approx 400 \times 6$</p>



Multiplication

	Starter ideas	Year 3 focus – Multiplication Unit 11	Year 4 focus – Multiplication Unit 10
Lesson 1	<p>Use a multiplication trio to identify related facts, e.g. $6 \times 4 = 24$ so $6 \times 40 = 240$.</p> <p>Identify the value of each digit to two decimal places in a variety of ways e.g. the value of the digit 7 in 53.27 is seven hundredths, $7/100$ or 0.07.</p>	<p>Use partitioning to calculate a two-digit number multiplied by a single digit number using grid method.</p> <p>Use rounding to estimate the answer to a calculation.</p>	<p>Solve problems by using partitioning to calculate a three-digit number multiplied by a single digit number using grid method.</p> <p>Estimate multiplication by rounding to the nearest multiple of 10 or 100 and using related facts e.g. $384 \times 6 \approx 400 \times 6$.</p>
Lesson 2	<p>Derive the 8 multiplication table from the 1x, 2x, 5x and 10x tables.</p> <p>Count backwards through zero to include negative numbers.</p>	<p>Use partitioning to calculate a two-digit number multiplied by a single digit number using grid method.</p> <p>Within known tables, use partitioning to multiply T1 by a one-digit number.</p>	<p>Represent multiplication of three numbers using arrays e.g. $2 \times 3 \times 4$ can be shown using a 2×3 array four times.</p> <p>Use commutativity to reorder multiplication of three numbers to simplify the calculation e.g. $4 \times 7 \times 5$ becomes $4 \times 5 \times 7 = 20 \times 7$.</p>
Lesson 3	<p>Tell and write the time on an analogue clock to the nearest minute – past and to.</p> <p>Correctly place multiples of 0.01 on a number line with multiples of 0.1 marked but not labelled.</p>	<p>Use compensation to multiply 19 by a single digit number.</p>	<p>Use inverse to check the answer to a calculation, e.g. $256 \div 4 = 64$ can be checked by carrying out the following calculation correctly: 64×4.</p>
Lesson 4	<p>Round numbers with up to three digits to the nearest 100.</p>	<p>Solve positive integer scaling problems.</p>	<p>Learning check</p>
Lesson 5	<p>Use multiplication trios to identify missing numbers in multiplication and division number sentences, e.g. $7 \times \quad = 28$.</p>	<p>Solve correspondence problems in which n objects are connected to m objects. (finding all possibilities).</p>	<p>Learning check</p>



Division

	Starter ideas	Year 3 focus – Division Unit 13	Year 4 focus – Division Unit 11
Lesson 1	<p>Partition a three-digit number using base 10 apparatus into two groups in different ways where one group is a multiple of 10 e.g. $165 = 150 + 15$.</p> <p>Partition a four-digit number into two groups where one group is a multiple of 100 without practical equipment in a variety of ways.</p>	<p>Use partitioning to derive and use halves of multiples of 10 where the tens digit is odd.</p> <p>Use partitioning to derive and use halves of all even numbers to 100.</p>	<p>Use partitioning to halve any four-digit number where each digit is even.</p> <p>Use partitioning to halve a number with ones and tenths where both digits are even.</p>
Lesson 2	<p>Recall and use multiplication and division facts for the 8 times table.</p> <p>Use Venn and Carroll diagrams to sort numbers.</p>	<p>Use a horizontal number line to show division as repeated subtraction including numbers beyond the multiplication facts that they know.</p>	<p>Use partitioning to halve any four-digit even number where some of the digits are odd e.g. 4524 could be partitioned into $4000 + 500 + 20 + 4$ or $4400 + 100 + 24$.</p> <p>Use partitioning to halve any number with ones and tenths where the tenths digit is even e.g. half of 3.6 could be partitioned into $3 + 0.6$ or $2 + 1.6$.</p>
Lesson 3	<p>Use a mental counting on strategy to calculate a small difference, e.g. $102 - 95 =$</p> <p>Use related facts to multiply tens and ones by 5 by multiplying by 10 and halving.</p>	<p>Use a vertical number line to show division as repeated subtraction including numbers beyond the multiplication facts that they know using greater multiples of the divisor.</p>	<p>Divide a two-digit number by a one-digit number using a partitioning strategy e.g. $96 \div 4$ becomes $(80 \div 4) + (16 \div 4)$.</p>
Lesson 4	<p>Add 3 two-digit multiples of 10.</p> <p>Write any number of hundredths in fraction and decimal form e.g. $47/100$ is 0.47.</p>	<p>Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using greater multiples of the divisor (including remainders).</p>	<p>Divide three-digit numbers by a single digit number using the chunking method where there is no remainder e.g. $248 \div 4$</p>
Lesson 5	<p>Multiply 19 by a single digit number.</p> <p>Compare and order two or more numbers with ones, tenths and hundredths.</p>	<p>Use division to identify unlabelled marks on a scale.</p> <p>Read different scales to the nearest whole unit.</p>	<p>Divide three-digit numbers by a single digit number using the chunking method, making the calculation more efficient by subtracting more than one multiple of 10 of the divisor e.g. $248 \div 4$ by subtracting 240 (60 groups of 4) and 8 (2 groups of 4).</p>
Lesson 6	<p>Divide a one-digit or two-digit number by 100.</p>	<p>Learning check</p>	<p>Divide three-digit numbers by a single digit number using the chunking method, making the calculation more efficient by subtracting more than one multiple of 10 of the divisor e.g. $248 \div 4$ by subtracting 240 (60 groups of 4) and 8 (2 groups of 4). Estimate division by rounding to the nearest multiple of 10 of the divisor and using related facts e.g. $352 \div 6 \approx 360 \div 6$</p>



Lesson 7	Recall multiplication and division facts for the 7 and 12 multiplication table.	Learning check	Use inverse to check the answer to a calculation, e.g. $78 \times 6 = 468$ can be checked by carrying out the following calculation correctly: $468 \div 6$
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Fractions

	Starter ideas	Year 3 focus – Fractions Unit 12	Year 4 focus – Fractions Unit 13
Lesson 1	Derive the 8 multiplication table by using doubling and addition. Use partitioning to double a number with ones and tenths, e.g. double 6.8	Recognise fractions of a shape, set of objects or quantity (with small denominators).	Where a fraction of an amount cannot be found by using known division facts, use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects, e.g. $\frac{3}{8}$ of 112.
Lesson 2	Compare and order numbers with up to three digits. Compare and order unit fractions and fractions with the same denominators (including on a number line).	Recognise and use fractions as numbers (on a bar model and demarcated number line). Estimate the position of a fraction on a number line.	Use pictorial representations, such as fraction strips, to add fractions with the same denominator crossing a ones boundary, e.g. $\frac{5}{7} + \frac{4}{7} = \frac{9}{7}$ Add fractions with the same denominator crossing a ones boundary by adding the numerators.
Lesson 3	Recall pairs of multiples of 100 that make 1000. Use partitioning to halve any four-digit number where each digit is even.	Use concrete materials to find unit fractions (with denominators of ten or less) of a set of objects, e.g. $\frac{1}{7}$ of 63. Use concrete materials to find non-unit fractions (with denominators of ten or less) of a set of objects, e.g. $\frac{2}{7}$ of 63.	Use pictorial representations, such as fraction strips, to subtract fractions with the same denominator crossing a ones boundary. Subtract fractions with the same denominator crossing a ones boundary by subtracting the numerators, e.g. $\frac{15}{9} - \frac{8}{9} = \frac{7}{9}$
Lesson 4	Derive addition and subtraction facts for 100 using number lines.	Use pictorial representations, e.g. bar model, to find unit fractions of a set of objects, e.g. $\frac{1}{3}$ of 51. Use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects, e.g. $\frac{2}{3}$ of 51.	Learning check
Lesson 5	Round numbers with up to three digits to the nearest 10 and 100.	Solve problems involving fractions.	Learning check



Addition, subtraction and statistics

	Starter ideas	Year 3 focus – Addition, subtraction and statistics Unit 16	Year 4 focus – Addition and subtraction Unit 12 Statistics Unit 18
Lesson 1	Recall addition and subtraction facts for 100 (multiples of 5 and 10). Use appropriate factor pairs and commutativity in mental calculations.	Add two numbers with three digits using formal written methods of columnar addition with exchange from ones into tens and tens into hundreds, e.g. $468 + 356$ Use rounding to estimate, and inverse to check, the answer to a calculation.	Recognise calculations that require counting on or back mentally, bridging through a multiple of 10 efficiently.
Lesson 2	Add and subtract a three-digit number and tens mentally, crossing a hundreds boundary. Identify missing numbers in a number sequence.	Subtract numbers with three digits using formal written methods of columnar subtraction with exchange from tens into ones and hundreds into tens, e.g. $426 - 357$ Use rounding to estimate, and inverse to check, the answer to a calculation.	Recognise calculations that require a mental compensation method.
Lesson 3	Recall pairs of multiples of 100 that make 1000. Use two criteria Carroll diagrams to compare and sort objects, numbers and shapes.	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Explain what a time graph is showing, e.g. a child might describe temperature increasing or decreasing at different times during a day. Answer questions using time graphs by reading from labelled values, e.g. what was the temperature at 3:00pm (where each hour is labelled on the x axis).
Lesson 4	Derive addition and subtraction facts for 100 using number lines. Write any number of hundredths in fraction and decimal form.	Present data using bar charts with a scale in fives or tens. Select the most appropriate scale when representing data in a bar chart. Interpret information in a bar chart to solve two-step questions.	Present time graphs from given data using appropriate scales.
Lesson 5	Round numbers with up to three digits to the nearest 10. Correctly place multiples of 100 on a number line with multiples of 1,000 marked but not labelled (with start and end labelled 0 and 10,000)	Select the most appropriate key when representing data in a pictogram. Interpret information in a pictogram to solve two-step questions.	Answer questions using time graphs by reading from between labelled values, e.g. what was the temperature at 1:30pm (where each hour is labelled on the x axis)



Spring Term 2

Measures

	Starter ideas	Year 3 focus – Volume, capacity and mass Unit 14	Year 4 focus – Measures Unit 19
Lesson 1	<p>Read different scales to the nearest whole unit.</p> <p>Correctly place multiples of one hundredth (0.01) on a number line with multiples of 0.1 marked but not labelled (with start and end labelled 0 and 1)</p>	<p>Estimate, measure and compare the volume/capacity of different containers.</p> <p>Find the difference between the volume/capacities of containers.</p>	<p>Measure, draw and compare lengths (cm/mm) and use known measurements to make reasonable estimates including numbers to one decimal place.</p>
Lesson 2	<p>Double a two-digit number where the total is more than 100.</p> <p>Tell the time on a 24-hour clock.</p>	<p>Measure and add the volume/capacity of different containers.</p>	<p>Measure, read and record lengths measured in m and cm. Understand how fractions of a metre can be recorded as cm or m using decimals.</p>
Lesson 3	<p>Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers.</p> <p>Recall multiplication and division facts for the 2, 3, 4, 5, 6, 8, 9, 10 and 11 multiplication tables.</p>	<p>Estimate, measure and compare the mass of different objects.</p> <p>Find the difference between the masses of objects.</p>	<p>Use the relationship between different units of length to identify the calculation necessary for conversion, e.g. to convert from m to cm, multiply the number of m by 100.</p>
Lesson 4	<p>Tell and write the time on an analogue clock to the nearest minute – past and to.</p> <p>Know that 1,000g = 1kg and vice versa.</p>	<p>Measure and add the mass of different objects.</p>	<p>Measure mass (kg/g) and use known measurements to make reasonable estimates including numbers to two decimal places.</p> <p>Compare the mass of different objects including numbers to two decimal places.</p>
Lesson 5	<p>Know that 1,000ml = 1 litre and vice versa.</p>	<p>Learning Check</p>	<p>Measure volume/capacity (l/ml) and use known measurements to make reasonable estimates including numbers to two decimal places.</p> <p>Compare the volume/capacity of different objects including numbers to two decimal places.</p>



2D shape and sorting

	Starter ideas	Year 3 focus – 2-D shape Unit 15	Year 4 focus – 2-D shape and sorting Unit 15
Lesson 1	<p>Count on and back in ones and tens from any two-digit number (crossing the 100 boundary)</p> <p>Recall multiplication and division facts for all multiplication tables up to 12×12</p>	<p>Recognise angles as a description of a turn.</p> <p>Recognise quarter-, half-, three-quarter- and full turns from different starting points as an appropriate number of right angles.</p>	<p>Know that an angle less than a right angle is called ‘acute’.</p> <p>Know that an angle between a right angle and a straight angle is called ‘obtuse’.</p> <p>Identify acute and obtuse angles where one of the lines is horizontal.</p> <p>Identify acute and obtuse angles where one of the lines is vertical.</p> <p>Identify acute and obtuse angles in any orientation.</p>
Lesson 2	<p>Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers.</p> <p>Write any number of hundredths in fraction and decimal form.</p>	<p>Recognise where sides meet at a vertex in a shape that an angle is created.</p> <p>Recognise a drawn right angle when presented in any orientation.</p>	<p>Compare any two angles less than two right angles where one of the lines is horizontal, identifying which is greater and less.</p> <p>Order more than two angles less than two right angles where one of the lines is horizontal.</p> <p>Compare any two angles less than two right angles where one of the lines is vertical, identifying which is greater and less.</p> <p>Order more than two angles less than two right angles where one of the lines is vertical.</p>
Lesson 3	<p>Add and subtract a three-digit number and ones mentally, crossing a hundreds boundary.</p> <p>Partition a four-digit number represented using place value counters into thousands, hundreds, tens and ones in different ways.</p>	<p>Identify pairs of perpendicular and parallel lines.</p>	<p>Identify a vertical or horizontal line of symmetry in a shape.</p> <p>From a set of shapes, identify those with a vertical or horizontal line of symmetry and those without.</p>
Lesson 4	<p>Recall/derive multiplication facts for the 2, 3, 4, 5, 8 and 10 multiplication tables.</p> <p>Find unit and non-unit fractions of amounts.</p>	<p>Sort 2-D shapes according to their properties - Venn with two intersecting sets and two criteria Carroll diagrams (perpendicular, parallel, right angles)</p>	<p>Complete a simple symmetric figure using a vertical or horizontal line of symmetry where the mirror line cuts the shape in half.</p>
Lesson 5	<p>Identifying the bond to the next multiple of 100.</p> <p>Identifying the bond to the next multiple of 1000.</p>	<p>Draw 2-D shapes with specific properties (perpendicular, parallel, right angles)</p>	<p>Name triangles according to their properties (scalene, isosceles, equilateral) and use the terms regular and irregular.</p>
Lesson 6	<p>Use knowledge of place value and multiplication facts to multiply and divide related greater number.</p>	<p>Learning check</p>	<p>Name quadrilaterals (square rectangle, oblong rectangle, rhombus, parallelogram, kite, trapezium, isosceles trapezium) according to their properties and use the terms regular and irregular.</p>
Lesson 7	<p>Order numbers with different numbers of digits up to 10,000</p>	<p>Learning check</p>	<p>Identify properties of 2-D shapes including: sides – number of sides, where any are equal, parallel and perpendicular</p>



			vertices – number of vertices, size of angles (right, acute, obtuse and where angles are equal) diagonals – number, if and how they intersect, line symmetry.
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Fractions, addition, subtraction and money

	Starter ideas	Year 3 focus – Fractions Unit 17	Year 4 focus - Addition and subtraction and money Unit 14
Lesson 1	Use partitioning to derive and use halves of multiples of 10 where the tens digit is odd. Recall and use addition and subtraction facts for 100.	Use pictorial representations, including the number line, to compare and order fractions with the same denominator. Use pictorial representations to compare and order unit fractions.	Subtract a three-digit number from a three-digit number including crossing the hundreds boundary, e.g. 303 – 196
Lesson 2	Tell and write the time on an analogue clock to the nearest minute – past and to. Add more than two single digit numbers efficiently using reordering, number bonds and place value knowledge.	Use concrete and pictorial representations to recognise where fractions are equivalent.	Add more than two numbers with up to four digits using formal written method of columnar addition.
Lesson 3	Use multiplication trios to identify missing numbers in multiplication and division number sentences, e.g. $7 \times \quad = 28$ Tell the time on a 24 - hour clock.	Use concrete and pictorial representations to recognise where fractions are equivalent.	Use inverse to check the answer to a calculation, e.g. $4,423 + 2,389 = 6,812$ can be checked by carrying out either of the following calculations correctly: $6,812 - 4,423$ or $6,812 - 2,389$
Lesson 4	Count on and back insteps of unit fractions with small denominators. Recognise that when writing amounts of money, either £ or p are used but never together. Recognise that when an amount of money is in pounds and pence it can be written with a £ sign and a decimal point separating the whole pounds and the pence.	Add fractions to make one whole. Subtract fractions from one whole.	Add two numbers with one decimal place using formal written methods of columnar addition with exchange. Use appropriate rounding to estimate the answer to a calculation.
Lesson 5	Use a mental compensation strategy to add or subtract, e.g. $175 - 39$ Recognise that, when calculating addition facts to 10, the ones total 9 and the tenths total 1.	Add fractions with the same denominator within one whole.	Subtract two numbers with one decimal place using formal written methods of columnar subtraction with exchange.



Lesson 6	Use partitioning to derive and use halves of all numbers to 100.	Subtract fractions with the same denominator within one whole.	Learning check
Lesson 7	Use known facts to multiply a multiple of 10 by a single digit number.	Add and subtract fractions with the same denominator within one whole.	Learning check

Position and direction

	Starter ideas	Year 3 focus – Position and direction Unit 18	Year 4 focus - Position and direction Unit 16
Lesson 1	Partition a three-digit number without the use of practical equipment into two groups in different ways where one group is a multiple of 10. Tell the time on a 24-hour clock.	Describe positions on a square grid labelled with letters and numbers.	Describe positions on a 2-D grid as coordinates in the first quadrant. Plot specified points.
Lesson 2	Multiply T1 by a single digit number. Name 3-D shapes including all prisms and pyramids according to their properties and describe them.	Use a grid to describe position, direction and movement in a straight line.	Plot specified points and draw sides to complete a given polygon.
Lesson 3	Find non-unit fractions of a set of objects within multiplication table knowledge, e.g. $\frac{3}{8}$ of 32 Recall multiplication and division facts for the 2, 3, 4, 5, 6, 8, 9, 10 and 11 multiplication tables.	Use a grid to describe position, direction, movement and turn.	Describe movements between positions as translations of a given unit to the left/right and up/down.
Lesson 4		Learning check	Learning check
Lesson 5		Learning check	Learning check



Calculation and Area

	Starter ideas	Year 3 focus – Calculation Unit 26	Year 4 focus – Area Unit 17 & 23
Lesson 1	Derive number bonds to 60. Multiply T9 by a one-digit number.	Estimate the answer to a calculation (all four operations).	Know area is a measure of surface within a given boundary. Find the area of irregular shapes (including those with curved sides) by counting squares. Find the area of rectangles presented on squared paper where the sides are horizontal and vertical by counting squares.
Lesson 2	Add and subtract fractions with the same denominator within one whole. Double and halve any four-digit number.	Choose and use an appropriate strategy to solve a variety of calculations.	Use knowledge of arrays to find the area of rectangles by counting squares in groups. Find the area of other rectilinear shapes presented on squared paper where the sides are horizontal and vertical by counting squares in groups.
Lesson 3	Derive number bonds to 60. Find unit and non-unit fractions of amount.	Solve one and two step problems involving money.	Find the area of rectilinear shapes by counting squares in groups (where sides are horizontal or vertical).
Lesson 4	Round numbers with up to three digits to the nearest hundred. Use the relationship between different units of length to identify the calculation necessary for conversion e.g. to convert between cm and m, divide the number of cm by 100.	Use bar modelling to solve addition and subtraction problems. Use inverse operations to check answers.	Find the area of rectangles (and rectilinear shapes) presented on squared paper where the sides are not horizontal and vertical by counting half squares.
Lesson 5	Identify the number of days in each month.	Use bar modelling to solve multiplication and division problems. Use inverse operations to check answers.	Learning Check



Summer Term 1

Place value

	Starter ideas	Year 3 focus – Decimal place value Unit 23	Year 4 focus – Place value Unit 20
Lesson 1	Use a multiplication trio to identify related facts, e.g. $6 \times 4 = 24$ so $6 \times 40 = 240$ Compare and classify geometric shapes (2-D shapes), based on their properties and sizes.	Use concrete representations, e.g. straws, to understand the relationship between fractional tenths and decimal tenths. Identify the value of each digit to one decimal place. Know the decimal point separates whole numbers and decimal fractions.	Identify, represent and estimate numbers using different representations (including the number line). Find 0.1, 1, 10, 100 or 1,000 more or less than a given number.
Lesson 2	Identify and describe 2-D shapes. Identify, represent and estimate numbers using different representations.	Use concrete representations, e.g. place value counters, to understand the relationship between fractional tenths and decimal tenths.	Order and compare numbers beyond 1,000
Lesson 3	Find non-unit fractions of a set of objects within multiplication table knowledge, e.g. $\frac{3}{8}$ of 32 Write any number of hundredths in fraction and decimal form e.g. $\frac{47}{100}$ is 0.47	Divide a one-digit number by 10 and describe the effect using a place value chart.	Compare numbers with the same number of decimal places saying which number is more or less and use $<$, $>$ and $=$ correctly. Pay particular attention to numbers that have the same digits, e.g. 115.62 and 161.52 Order numbers with the same number of decimal places saying which numbers are greater or less. Pay particular attention to numbers that have the same digits, e.g. 65.12, 21.56 and 26.15
Lesson 4	Tell the time on an analogue clock to the nearest minute. Tell the time on a 24-hour clock, e.g. 16:27 is 27 minutes past 4 in the afternoon.	Count up and down in fractional and decimal tenths.	Round any number to the nearest 10, 100 or 1,000
Lesson 5	Read scales to the nearest whole unit. Use knowledge of equivalence to refine the sequence, e.g. 1.42, 1.41, 1.4, 1.39, 1.38 Count up and down in decimal hundredths (0.01) including where ones boundaries are crossed, e.g. 5.97, 5.98, 5.99, 6, 6.01, 6.02	Identify fractional and decimal tenths on number lines.	Identify the whole numbers immediately before and after a number to one decimal place where the number is less than 10 Round numbers with one decimal place to the nearest whole number where the number is less than 10 Identify the whole numbers immediately before and after a number to one decimal place where the number is up to 10,000 Round numbers with one decimal place to the nearest whole number where the number is up to 10,000
Lesson 6	Count on and back in tens (crossing the hundred boundary) and hundreds.	Compare numbers with one decimal place.	Learning check



Lesson 7	Multiply T1 by a single digit number.	Order numbers with one decimal place.	Learning check
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Addition and subtraction

	Starter ideas	Year 3 focus - Addition and subtraction Unit 20	Year 4 focus – Addition and subtraction Unit 21
Lesson 1	Recall pairs of multiples of 100 that make 1000 Find 0.1, 1, 10, 100 or 1,000 more or less than a given number.	Add more than two numbers with three digits using formal written methods of columnar addition with exchange from ones into tens and tens into hundreds including when the 'carried' amount has more than one ten e.g. $326 + 147 + 219$ Use rounding to estimate, and inverse to check, the answer to a calculation.	Partition a four-digit number without the use of practical equipment into two groups in different ways where one group is appropriate to the context e.g. $1,500 + 2,643 = 1,500 + 2,500 + 143$
Lesson 2	Compare and order numbers with up to three digits. Describe and extend number sequences involving counting on or back in different steps.	Identify missing digits in columnar addition calculations.	Mental addition strategies – whole numbers and decimals incl. add a number with one decimal place to another where the ones boundary is crossed, e.g. $14.7 + 8.6$ (This could be supported by jottings or a number line)
Lesson 3	Partition numbers in different ways. Partition numbers in different ways (e.g. $2.3 = 2 + 0.3$ & $1 + 1.3$)	Subtract numbers with different numbers of digits up to three digits, using formal written methods of columnar subtraction with exchange from tens into ones and hundreds into tens, e.g. $334 - 68$ using the place value columns to set the calculation out correctly. Use rounding to estimate, and inverse to check, the answer to a calculation.	Mental subtraction strategies – whole numbers and decimals incl. subtract a number with one decimal place from another where the ones boundary is crossed, e.g. $14.2 - 5.6$ (This could be supported by jottings or a number line)
Lesson 4	Recall addition and subtraction facts for 100 (multiples of 5 and 10) Recall multiplication and division facts for all multiplication tables up to 12×12	Identify missing digits in columnar subtraction calculations.	(Recap) Mental calculation strategies – whole numbers and decimals. Select a mental strategy appropriate for the numbers involved in the calculation (counting on, partitioning, bridging, reordering, compensation)
Lesson 5	Describe and extend number sequences. Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer.	Recognise addition calculations that require bridging through a multiple of 10 or 100 efficiently.	Use mental calculation strategies to calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.



Addition and subtraction

	Starter ideas	Year 3 focus – Addition and subtraction Unit 20	Year 4 focus – Addition and subtraction Unit 21
Lesson 1	<p>Name and describe properties of 2-D shapes.</p> <p>Identify, represent and estimate numbers using different representations.</p>	Recognise subtraction calculations that require bridging through a multiple of 10 or 100 efficiently.	<p>Add more than two numbers with up to one decimal place using formal written methods of columnar addition with exchange, e.g. $268 + 34.7 + 356.5$</p> <p>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p>
Lesson 2	<p>Double multiples of 50 to 500</p> <p>Recall and use addition and subtraction facts for 100</p> <p>Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)</p>	Recognise calculations that require counting on mentally to find the difference.	<p>Subtract two numbers with one decimal place using formal written methods of columnar subtraction with exchange where the greater number has 0 as a place holder, e.g. $50.7 - 23.8$</p> <p>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p>
Lesson 3	<p>Round numbers with up to three digits to the nearest 10 or 100</p> <p>Round any number to the nearest 10, 100 or 1,000</p>	Choose an appropriate strategy to solve a calculation based upon the numbers involved.	<p>Estimate; use inverse operations to check answers to a calculation.</p> <p>Solve addition and subtraction problems involving missing numbers.</p>
Lesson 4	Use a mental partitioning strategy for addition or subtraction of 2 two- and three-digit numbers.	Learning check	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally without a jotting, use a jotting, written method)
Lesson 5	Order and compare numbers beyond 1,000	Learning check	Describe and extend number sequences involving counting on or back in different steps.



Multiplication, division and measures

	Starter ideas	Year 3 focus – Multiplication and division Unit 21	Year 4 focus – Multiplication, division and measures Unit 22
Lesson 1	Count from 0 in multiples of 4 and 8 Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer.	Describe and extend number sequences involving counting on or back in different steps (including 4, 8, 50 and 100) Identify and describe the rule in a number sequence by calculating the step size between non-adjacent numbers in the sequence.	Use related facts to multiply 10×20 (by doubling then multiplying by 10) Recognise and use factor pairs and commutativity in mental calculations.
Lesson 2	Count from 0 in multiples of 50 and 100 Order and compare numbers beyond 1,000	Use the grid method to solve a two-digit by one-digit multiplication. Use rounding to estimate the answer to a calculation.	Recap mental multiplication strategies: compensation, partitioning (incl. doubling), factor pairs, multiplying by 0 and 1, multiplying together three numbers.
Lesson 3	Use partitioning to derive and use halves of all numbers to 100 Partition numbers in different ways (e.g. $2.3 = 2 + 0.3$ & $1 + 1.3$)	Use the grid method to solve multiplication problems including positive integer scaling problems. Use rounding to estimate the answer to a calculation.	Recap mental division strategies (halving, dividing by 1, partitioning, related facts)
Lesson 4	Tell the time on a digital clock to the nearest minute. Recall multiplication and division facts for all multiplication tables up to 12×12	Identify missing numbers in grid method calculations.	Select a mental strategy appropriate for the numbers involved in the calculation.
Lesson 5	Use multiplication trios to identify missing numbers in multiplication and division number sentences. Use knowledge of place value and multiplication facts to multiply and divide related greater numbers e.g. $630 \div 9 = 70$	Choose an appropriate strategy to solve a multiplication calculation based upon the numbers involved.	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout (grid method)



Multiplication, division and measures

	Starter ideas	Year 3 focus – Multiplication and division Unit 21	Year 4 focus – Multiplication, division and measures Unit 22
Lesson 1	Use a mental counting on strategy to calculate a small difference. Identify acute and obtuse angles in any orientation.	Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using repeated greater multiples of the divisor (including remainders) Use rounding to estimate the answer to a calculation.	Solve problems involving multiplying and adding, including using the distributive law to multiply two and three digit numbers by one digit, integer scaling problems.
Lesson 2	Add and subtract fractions with the same denominator within one whole. Identify, represent and estimate numbers using different representations.	Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using efficient greater multiples of the divisor (including remainders) Use rounding to estimate the answer to a calculation.	Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, harder correspondence problems such as n objects are connected to m objects.
Lesson 3	Use a mental compensation strategy to add or subtract. Compare and classify geometric shapes (3-D shapes), based on their properties and sizes.	Solve division problems that require the interpretation of remainders.	Divide three-digit numbers by a single digit number efficiently using the chunking method where there is a remainder e.g. $176 \div 6$, and interpret remainders appropriately for the context.
Lesson 4	Multiply 19 by a single digit number. Round any number to the nearest 10, 100 or 1,000	Choose an appropriate strategy to solve a division calculation based upon the numbers involved.	Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
Lesson 5	Use a variety of sorting diagrams to compare and classify numbers and geometric shapes based on their properties.	Learning check	Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)
Lesson 6	Use the common points of reference they know to estimate the time of various events.	Learning check	Solve problems involving converting from years to months; weeks to days.
Lesson 7	Partition numbers in different ways.	Learning check	Solve problems involving converting from hours to minutes; minutes to seconds.



Time

	Starter ideas	Year 3 focus – Time Unit 29	Year 4 focus – Learning check of Summer 1
Lesson 1	Use partitioning to double or halve any number, including decimals to one decimal place.	Record and compare time in terms of seconds, minutes and hours.	
Lesson 2	Recall multiplication and division facts for all multiplication tables up to 12×12	Tell and write the time from an analogue clock including using Roman numerals.	
Lesson 3	Count up and down in tenths.	Tell and write the time from a 12 hour digital clock.	
Lesson 4	Use a mental counting on strategy to calculate a small difference, e.g. $102 - 95$	Solve problems involving time.	
Lesson 5	Use multiplication trios to identify missing numbers in multiplication and division number sentences, e.g. $7 \times \quad = 28$	Solve problems involving time.	



Summer Term 2

Place value

	Starter ideas	Year 3 focus – Place value Unit 25	Year 4 focus – Place value Unit 27
Lesson 1	Recall multiplication facts for the 2, 3, 4, 5 8 and 10 multiplication tables. Recognise and show, using diagrams, families of common equivalent fractions.	Read Roman numerals from I to XII	Count backwards through zero to include negative numbers.
Lesson 2	Partition numbers in different ways. Recall multiplication and division facts for all multiplication tables.	Estimate and place numbers on a range of number lines.	Know that L represents 50 and C represents 100 Represent numbers with only additive properties up to 100 i.e. not ending in 4 or 9
Lesson 3	Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers. Tell the time on a 24-hour clock, e.g. 16:27 is 27 minutes past 4 in the afternoon.	Estimate and place numbers on a range of number lines.	Know that I can only be used before V and X to represent 1 less than 5 (4) and 1 less than 10 (9) Know that X can only be used before L and C to represent 10 less than 50 (40) and 10 less than 100 (90) Represent any number up to 100
Lesson 4	Tell the time on a digital clock to the nearest minute.	Read scales for mass, volume/capacity and temperature.	Learning check
Lesson 5	Use a mental compensation strategy to add or subtract, e.g. 175 – 39	Solve non-routine problems involving rounding.	Learning check



Fractions

	Starter ideas	Year 3 focus – Fractions Unit 27	Year 4 focus – Fractions Unit 24
Lesson 1	Add and subtract fractions with the same denominator. Count on and back in steps of unit fractions.	Identify fractions with the same denominators on a number line (marked and unmarked) Compare and order fractions with the same denominators.	Use pictorial representations such as fraction walls to recognise where more than two fractions are equivalent e.g. $\frac{3}{4}$, $\frac{6}{8}$ and $\frac{9}{12}$
Lesson 2	Partition numbers in different ways. Recall multiplication and division facts for all multiplication tables.	Compare and order unit fractions such as $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{1}{6}$ by positioning them including on a number line.	Recognise and show, using diagrams, families of common equivalent fractions.
Lesson 3	Recall addition and subtraction facts for 100 (multiples of 5 and 10) Use partitioning to double or halve any number, including decimals to one place.	Recognise and show, using diagrams, equivalent fractions with small denominators, applying in different contexts.	Recognise and show, using diagrams, families of common equivalent fractions.
Lesson 4	Round numbers with up to three digits to the nearest 10 or 100 Tell the time on a 24-hour clock.	Use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects beyond multiplication table knowledge (using a multiplication grid), e.g. $\frac{3}{7}$ of 56.	Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
Lesson 5	Count up and down in tenths. Derive and use addition and subtraction facts for 1 and 10 (one dp)	Use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects beyond multiplication table knowledge (using a multiplication grid), e.g. $\frac{3}{7}$ of 56	Add and subtract fractions with the same denominator (using diagrams)



Time and Fractions

	Starter ideas	Year 3 focus – Time Unit 19	Year 4 focus – Fractions Unit 24
Lesson 1	<p>Correctly place whole numbers up to 10,000 on a number line.</p> <p>Find the effect of dividing a one- or two-digit number by 10 and 100</p>	Tell the time on an analogue clock for minutes past and to, e.g. 33 minutes past 4 and 27 minutes to 5.	Where a fraction of an amount cannot be found by using known division facts, use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects.
Lesson 2	<p>Round any number to the nearest 10, 100 or 1,000</p> <p>Recall multiplication and division facts for all multiplication tables.</p>	Tell the time on a digital clock to the nearest minute and know whether this is before or after midday.	Find non-unit fractions of an amount by using division to find the unit fraction then multiplying to scale up by the numerator e.g. $\frac{4}{7}$ of 315 by calculating $315 \div 7$ to find $\frac{1}{7}$ of 315 which is 45 then 45×4 to find $\frac{4}{7}$ of 315 which is 180
Lesson 3	<p>Recognise and write decimal equivalents of any number of tenths or hundredths.</p> <p>Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$</p> <p>Use partitioning to derive and use halves of all numbers to 100</p>	Solve time problems working within the hour boundary.	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.
Lesson 4	<p>Count on and back in steps of $\frac{1}{3}$</p> <p>Use multiplication trios to identify missing numbers in multiplication and division number sentences, e.g. $7 \times \quad = 28$</p>	Solve time problems working across the hour boundary.	Solve simple measure problems involving fractions and decimals to two decimal places.
Lesson 5	<p>Multiply 19 by a single digit number.</p> <p>Use a mental counting on strategy to calculate a small difference, e.g. $102 - 95 =$</p>	Solve calendar problems working across the month boundary.	Solve simple money problems involving fractions and decimals to two decimal places.



2D and 3D shape

	Starter ideas	Year 3 focus – 2-D shape Unit 22 3-D shape Unit 24	Year 4 focus – 2-D and 3-D shape Unit 25
Lesson 1	<p>Use sorting diagrams to compare and sort common 2-D shapes.</p> <p>Recall multiplication and division facts for all multiplication tables.</p>	Identify whether an angle is greater or less than a right angle.	Complete a simple symmetric figure where the line of symmetry is not vertical or horizontal.
Lesson 2	<p>Double multiples of 50 to 500</p> <p>Recognise and show, using diagrams, families of common equivalent fractions.</p>	Accurately draw 2-D shapes with specific properties (including angles)	Compare and name any two angles less than two right angles in any orientation, identifying which is greater and less. Order more than two angles less than two right angles in any orientation.
Lesson 3	<p>Use a mental partitioning strategy for addition or subtraction of 2 two-digit numbers.</p> <p>Use partitioning to mentally divide two-digit and three-digit numbers by a one-digit number.</p>	Measure the perimeter of simple polygons by measuring each side using a ruler and calculating the total.	Compare and name any two angles less than two right angles in any orientation, identifying which is greater and less. Order more than two angles less than two right angles in any orientation.
Lesson 4	<p>Correctly place multiples of one hundredth (0.01) on a number line with multiples of 0.1 marked but not labelled (with start and end labelled 0 and 1)</p> <p>Identify whether an angle is greater or less than a right angle.</p>	Recognise and describe 3-D shapes in different orientations.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes (2-D shapes)
Lesson 5	<p>Tell the time on a 24-hour clock, e.g. 16:27 is 27 minutes past 4 in the afternoon.</p> <p>Divide a two-digit number by a one-digit number.</p>	Sort 3-D shapes according to their properties (using Venn diagrams with two intersecting sets and two criteria Carroll diagrams)	Compare and classify geometric shapes based on their properties and sizes (3-D shapes)



Statistics

	Starter ideas	Year 3 focus – Statistics Unit 28	Year 4 focus – Statistics Unit 26
Lesson 1	<p>Use a multiplication trio to identify related facts, e.g. $6 \times 4 = 24$ so $6 \times 40 = 240$</p> <p>Find non-unit fractions of an amount.</p>	<p>Pose a question and identify what data to collect to answer the question. Collect and record data.</p>	<p>Understand that discrete data that can only take specific, separate values and the data sets are not related to each other. Interpret and present discrete data using appropriate graphical methods, including bar charts.</p>
Lesson 2	<p>Count up and down in tenths.</p> <p>Recall and use addition and subtraction facts for 100 Derive and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place)</p>	<p>Present data in a bar chart with an appropriate scale.</p>	<p>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</p>
Lesson 3	<p>Find non-unit fractions of a set of objects within multiplication table knowledge, e.g. $\frac{3}{8}$ of 32</p> <p>Use knowledge of place value and multiplication facts to multiply and divide related greater numbers e.g. $630 \div 9 = 70$</p>	<p>Present data in a pictogram with an appropriate key.</p>	<p>Understand that continuous data is data that can take on any value along a continuum. Interpret and present continuous data using appropriate graphical methods, including time graphs.</p>
Lesson 4	<p>Count on and back in tens (crossing the hundred boundary) and hundreds.</p> <p>Round any number to the nearest 10, 100 or 1,000</p>	<p>Use and interpret data from bar charts and pictograms to answer questions. Compare and evaluate representations of data.</p>	<p>Solve comparison, sum and difference problems using information presented in time graphs.</p>
Lesson 5	<p>Multiply T1 by a single digit number.</p> <p>Recall multiplication and division facts for all multiplication tables.</p>	<p>Solve problems involving statistics (convert between different representations, incomplete sets of data, matching tables to graphs)</p>	<p>Use a variety of sorting diagrams to compare and classify numbers.</p>