	Autumn Term	
OM focus	count from 0 in multiples of 4, 8, 50 and 100 Pupils now use multiples of 2, 3, 4, 5, 8, 10, 50 and 100. read and write numbers up to 1000 in numerals and in words	count in multiples of 6, 7, 9, 25 and 1000 read and write numbers up to 10 000 in numerals and in words count backwards through zero to include negative numbers
	count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Pupils connect tenths to place value, decimal measures and to division by 10.	count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Pupils are taught throughout that decimals and fractions are different ways of expressing numbers and proportions. Pupils should connect hundredths to tenths and place value and decimal measure. They practise counting using simple fractions and decimals, both forwards and backwards. Pupils learn decimal notation and the language associated with it, including in the context of measurements.
First Half		
P/V	find 10 or 100 more or less than a given number solve number problems and practical problems involving these ideas.	find 1000 more or less than a given number solve number and practical problems that involve all of the above and with increasingly large positive numbers
Addition 1 method	add numbers with up to three digits, using formal written methods of columnar addition Pupils use their understanding of place value and partitioning, and practise using columnar addition with increasingly large numbers up to three digits to become fluent (see	add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate Pupils continue to practise columnar addition with increasingly large numbers to aid fluency

	estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. *Pupils practise solving varied addition questions*	estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Addition 2 application	add numbers with up to three digits, using formal written methods of columnar addition *Pupils use their understanding of place value and partitioning, and practise using columnar addition with increasingly large numbers up to three digits to become fluent* estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. *Pupils practise solving varied addition questions*	add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate *Pupils continue to practise columnar addition with increasingly large numbers to aid fluency* estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Subtraction 1 method	subtract numbers with up to three digits, using formal written methods of columnar subtraction *Pupils use their understanding of place value and partitioning, and practise using columnar subtraction with increasingly large numbers up to three digits to become fluent* estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. *Pupils practise solving varied addition and subtraction questions*	subtract numbers with up to 4 digits using the formal written methods of subtraction where appropriate *Pupils continue to practise columnar addition and subtraction with increasingly large numbers to aid fluency* estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Subtraction 2 application	subtract numbers with up to three digits, using formal written methods of columnar subtraction	subtract numbers with up to 4 digits using the formal written methods of subtraction where

	Pupils use their understanding of place value and partitioning, and practise using columnar subtraction with increasingly large numbers up to three digits to become fluent (see Mathematics Appendix 1). estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Pupils practise solving varied addition and subtraction questions	appropriate Pupils continue to practise columnar addition and subtraction with increasingly large numbers to aid fluency (see English Appendix 1). estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Multiplication 1	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency.	use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers Pupils practise mental methods and extend this to three-digit numbers to derive facts, (for example $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$). Pupils write statements about the equality of expressions (for example, use the distributive law $39 \times 7 = 30 \times 7 + 9 \times 7$ and associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$).
Time1	tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value (From number & place value)
Second Half		
Division/fractions (shape)	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators They continue to recognise fractions in the context of parts of a whole, numbers, measurements, a shape, and unit fractions as a division of a quantity.	Pupils make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities
Division/fractions/decimals 1	recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	solve problems involving increasingly harder fractions to calculate quantities, and fractions

	They begin to understand unit and non-unit fractions as numbers on the number line, and deduce relations between them, such as size and equivalence. They should go beyond the [0, 1] interval, including relating this to measure. Pupils understand the relation between unit fractions as operators (fractions of), and division by integers.	to divide quantities, including non-unit fractions where the answer is a whole number Pupils understand the relation between non-unit fractions and multiplication and division of quantities, with particular emphasis on tenths and hundredths.
2D - Properties	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them Pupils extend their use of the properties of shapes. Pupils connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts. identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Pupils continue to classify shapes using geometrical properties, extending to classifying different triangles (for example, isosceles, equilateral, scalene) and quadrilaterals (for example, parallelogram, rhombus, trapezium). identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
2D - symmetry	identify lines of symmetry in 2-D shapes presented in different orientations Pupils' knowledge of the properties of shapes is extended at this stage to symmetrical and non-symmetrical polygons and polyhedra.	identify lines of symmetry in 2-D shapes presented in different orientations. complete a simple symmetric figure with respect to a specific line of symmetry. Pupils draw symmetric patterns using a variety of media to become familiar with different orientations of lines of symmetry; and recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape.
2D - angles	recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle They should be able to describe the properties of 2-D and 3-D shapes using accurate language, including lengths of lines and acute and obtuse for angles greater or lesser than a right angle.	identify acute and obtuse angles and compare and order angles up to two right angles by size Pupils compare and order angles in preparation for using a protractor and compare lengths and angles to decide if a polygon is regular or irregular.
P/V money	add and subtract amounts of money to	estimate, compare and calculate

		give change, using both £ and p in practical contexts Pupils continue to become fluent in recognising the value of coins, by adding and subtracting amounts, including mixed units, and giving change using manageable amounts. They record £ and p separately. The decimal recording of money is introduced formally in year 4.	different measures, including money in pounds and pence
length		measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Pupils continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed units (for example, 1 kg and 200g) and simple equivalents of mixed units (for example, 5m = 500cm). The comparison of measures includes simple scaling by integers (for example, a given quantity or measure is twice as long or five times as high) and this connects to multiplication.	convert between different units of measure [for example, kilometre to metre; hour to minute] Pupils build on their understanding of place value and decimal notation to record metric measures, including money. They use multiplication to convert from larger to smaller units.

		Spring Term	
OM focus		identify, represent and estimate numbers using different representations Using a variety of representations, including those related to measure, pupils continue to count in ones, tens and hundreds, so that they become fluent in the order and place value of numbers to 1000. write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency. find the effect of multiplying and	identify, represent and estimate numbers using different representations Using a variety of representations, including measures, pupils become fluent in the order and place value of numbers beyond 1000, including counting in tens and hundreds, and maintaining fluency in other multiples through varied and frequent practice. use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers Pupils practise mental methods and extend this to three-digit numbers to derive facts, (for example 600 ÷ 3 = 200 can be derived from 2 x 3 = 6). Pupils write statements about

	dividing numbers by 10 and 100,	the equality of expressions (for example, use the distributive law 39 × 7 = 30 × 7 + 9 × 7 and associative law (2 × 3) × 4 = 2 × (3 × 4)). recognise and use factor pairs and commutativity in mental calculations They combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, 2 x 6 x 5 = 10 x 6 = 60. find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths Pupils' understanding of the number system and decimal place value is extended at this stage to tenths and then hundredths. This includes relating the decimal notation to division of whole number by 10 and later 100.
First Half		
P/V compare and order	recognise the place value of each digit in a three-digit number (hundreds, tens, ones) They use larger numbers to at least 1000, applying partitioning related to place value using varied and increasingly complex problems, building on work in year 2 (for example, 146 = 100 + 40 and 6, 146 = 130 + 16). compare and order numbers up to 1000 solve number problems and practical problems involving these ideas.	recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) compare and order numbers up to 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers
Addition 3 application	add numbers with up to three digits, using formal written methods of columnar addition Pupils use their understanding of	add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate

	place value and partitioning, and practise using columnar addition with increasingly large numbers up to three digits to become fluent estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Pupils practise solving varied addition questions	Pupils continue to practise columnar addition with increasingly large numbers to aid fluency estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Subtraction 3 application	subtract numbers with up to three digits, using formal written methods of columnar subtraction Pupils use their understanding of place value and partitioning, and practise using columnar subtraction with increasingly large numbers up to three digits to become fluent estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Pupils practise solving varied addition and subtraction questions	subtract numbers with up to 4 digits using the formal written methods of subtraction where appropriate Pupils continue to practise columnar addition and subtraction with increasingly large numbers to aid fluency estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Multiplication 2 method	multiply two-digit and three-digit numbers by a one-digit number using formal written layout Pupils develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division. solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. Pupils solve simple problems in contexts, deciding which of the four operations to use and why.	multiply two-digit and three-digit numbers by a one-digit number using formal written layout . Pupils practise to become fluent in the formal written method of short multiplication and short division with exact answers solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

	These include measuring and scaling contexts, (for example, four times as high, eight times as long etc.) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children).	Pupils solve two-step problems in contexts, choosing the appropriate operation, working with increasingly harder numbers. This should include correspondence questions such as the numbers of choices of a meal on a menu, or three cakes shared equally between 10 children.
Multiplication 3 application	multiply two-digit and three-digit numbers by a one-digit number using formal written layout Pupils develop reliable written methods for multiplication and division, starting with calculations of two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division. solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. Pupils solve simple problems in contexts, deciding which of the four operations to use and why. These include measuring and scaling contexts, (for example, four times as high, eight times as long etc.) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children).	multiply two-digit and three-digit numbers by a one-digit number using formal written layout . Pupils practise to become fluent in the formal written method of short multiplication and short division with exact answers solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. Pupils solve two-step problems in contexts, choosing the appropriate operation, working with increasingly harder numbers. This should include correspondence questions such as the numbers of choices of a meal on a menu, or three cakes shared equally between 10 children.
Second Half		
Division/fractions/decimals 2	recognise and show, using diagrams, equivalent fractions with small denominators	recognise and show, using diagrams, families of common equivalent fractions recognise and write decimal equivalents to ¼ ½ ¾ Pupils use factors and multiples to recognise equivalent fractions and simplify where appropriate (for example, 6/9 =2/32 or 1/4 =2/82).

		recognise and write decimal equivalents of any number of tenths or hundredths
Area	find the area of rectilinear shapes by counting squares	find the area of rectilinear shapes by counting squares They relate area to arrays and multiplication.
Mass	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Pupils continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed units (for example, 1 kg and 200g) and simple equivalents of mixed units (for example, 5m = 500cm). The comparison of measures includes simple scaling by integers (for example, a given quantity or measure is twice as long or five times as high) and this connects to multiplication.	convert between different units of measure [for example, kilometre to metre; hour to minute] Pupils build on their understanding of place value and decimal notation to record metric measures, including money. They use multiplication to convert from larger to smaller units.
statistics	interpret and present data using bar charts, pictograms and tables Pupils understand and use simple scales (for example, 2, 5, 10 units per cm) in pictograms and bar charts with increasing accuracy. solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. They continue to interpret data presented in many contexts.	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Pupils understand and use a greater range of scales in their representations. Pupils begin to relate the graphical representation of data to recording change over time. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
Time 2	estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight	read, write and convert time between analogue and digital 12- and 24-hour clocks

	Summer Term	

OM focus	add and subtract numbers mentally, including:
	    a three-digit number and ones
	    a three-digit number and tens
	    a three-digit number and hundreds
	For mental calculations with two-digit numbers, the answers could exceed 100.
		Pupils continue to practise mental methods with increasingly large numbers to aid fluency

First Half		
P/V rounding	round any number to the nearest 10, 100 solve number problems and practical problems involving these ideas.	round any number to the nearest 10, 100 or 1000 round decimals with one decimal place to the nearest whole number They connect estimation and rounding numbers to the use of measuring instruments. solve number and practical problems that involve all of the above and with increasingly large positive numbers
Addition and subtraction 4	add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction Pupils use their understanding of place value and partitioning, and practise using columnar addition and subtraction with increasingly large numbers up to three digits to become fluent estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Pupils practise solving varied addition and subtraction questions	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Pupils continue to practise columnar addition and subtraction with increasingly large numbers to aid fluency estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Multiplication 4	multiply two-digit and three-digit numbers by a one-digit number using formal written layout Pupils develop reliable written methods for multiplication and division, starting with calculations of	multiply two-digit and three-digit numbers by a one-digit number using formal written layout . Pupils practise to become fluent in the formal written

	two-digit numbers by one-digit numbers and progressing to the formal written methods of short multiplication and division. solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. Pupils solve simple problems in contexts, deciding which of the four operations to use and why. These include measuring and scaling contexts, (for example, four times as high, eight times as long etc.) and correspondence problems in which m objects are connected to n objects (for example, 3 hats and 4 coats, how many different outfits?; 12 sweets shared equally between 4 children; 4 cakes shared equally between 8 children).	method of short multiplication and short division with exact answers solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. Pupils solve two-step problems in contexts, choosing the appropriate operation, working with increasingly harder numbers. This should include correspondence questions such as the numbers of choices of a meal on a menu, or three cakes shared equally between 10 children.
Division/fractions/decimals 3	add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7] Pupils practise adding and subtracting fractions with the same denominator through a variety of increasingly complex problems to improve fluency. compare and order unit fractions, and fractions with the same denominators	add and subtract fractions with the same denominator Pupils continue to practise adding and subtracting fractions with the same denominator, to become fluent through a variety of increasingly complex problems beyond one whole. compare numbers with the same number of decimal places up to two decimal places They make comparisons and order decimal amounts and quantities that are expressed to the same number of decimal places. They should be able to represent numbers with one or two decimal places in several ways, such as on number lines.
Division/fractions/decimals 4	solve problems that involve all of the (fraction work) above.	solve simple measure and money problems involving fractions and decimals to two decimal places.

Time (duration) 3	know the number of seconds in a minute and the number of days in each month, year and leap year	solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.
	compare durations of events [for example to calculate the time taken by particular events or tasks].	compare durations of events [for example to calculate the time taken by particular events or tasks].

Second Half		
Statistics	interpret and present data using bar charts, pictograms and tables Pupils understand and use simple scales (for example, 2, 5, 10 units per cm) in pictograms and bar charts with increasing accuracy. solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. They continue to interpret data presented in many contexts.	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Pupils understand and use a greater range of scales in their representations. Pupils begin to relate the graphical representation of data to recording change over time. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
perimeter	measure the perimeter of simple 2-D shapes	measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit.
Geometry – position & direction	describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down plot specified points	describe positions on a 2-D grid as coordinates in the first quadrant Pupils draw a pair of axes in one quadrant, with equal scales and integer labels. They read, write and use pairs of coordinates, for example (2, 5), including using coordinate-plotting ICT tools.

		describe movements between positions as translations of a given unit to the left/right and up/down
		plot specified points and draw sides to complete a given polygon.
3D shapes nets	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them Pupils extend their use of the properties of shapes. Pupils connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts.	compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Pupils continue to classify shapes using geometrical properties, extending to classifying different triangles (for example, isosceles, equilateral, scalene) and quadrilaterals (for example, parallelogram, rhombus, trapezium).
Volume/Capacity	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Pupils continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed units (for example, 1 kg and 200g) and simple equivalents of mixed units (for example, 5m = 500cm). The comparison of measures includes simple scaling by integers (for example, a given quantity or measure is twice as long or five times as high) and this connects to multiplication.	convert between different units of measure [for example, kilometre to metre; hour to minute] Pupils build on their understanding of place value and decimal notation to record metric measures, including money. They use multiplication to convert from larger to smaller units.
Statistics	interpret and present data using bar charts, pictograms and tables Pupils understand and use simple scales (for example, 2, 5, 10 units per cm) in pictograms and bar charts with increasing accuracy. solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. They continue to interpret data presented in many contexts.	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Pupils understand and use a greater range of scales in their representations. Pupils begin to relate the graphical representation of data to recording change over time. solve comparison, sum and difference problems using information presented in bar

| | | charts, pictograms, tables and other graphs. |