Abacus Year 4 Teaching Overview

Autumn 1				
Week	**Strands**	**Weekly summary**		
1	Mental addition and subtraction **(MAS)**	Find pairs with a total of 100; add to the next multiple of 100 and subtract to the previous multiple of 100; subtract by counting up to find a difference; adding several numbers	Lesson 1 Finding pairs with a total of 100 (S: Knowing number bonds of all numbers to 12)	• work out bonds to 100.
			Lesson 2 Adding to the next multiple of a 100 (S: Adding to the next 10)	• organise their work in a logical way • begin to check that all solutions have been found.
			Lesson 3 Adding to the next multiple of a 100, subtracting to the previous multiple of 100, e.g. 543 + 57 = 600, 543 – 43 = 500 (S: Bonds to 20 +/-)	• work out how many to the next multiple of 100 and the previous multiple of 100.
			Lesson 4 Subtract by counting up to find a difference (S: Quarter past, half past, quarter to)	• solve subtractions of 3-digit numbers by counting up to next multiple of 10 then to multiple of 100 and then on.
			Lesson 5 Adding several numbers (S: Doubles to double 30)	• add several numbers using number facts, including multiples of 10 or 100.
2	Number and place-value **(NPV)**; Mental addition and subtraction **(MAS)**	Read, write 4-digit numbers and know what each digit represents; compare 4-digit numbers using < and > and place on a number line; add 2-digit numbers mentally; subtract 2-digit and 3-digit numbers	Lesson 6 Read, write and know what each digit represents in a 4-digit number (S: Adding 1-digit numbers to 2-digit numbers crossing 10s)	• recognise what each digit represents in a 4-digit number • read and write 4-digit numbers including using zeros as place-holders.
			Lesson 7 Read, write and know what each digit represents in a 4-digit number; Compare 4-digit numbers using < and > signs (S: Subtracting 1-digit numbers from 2-digit numbers)	• recognise what each digit represents in a 4-digit number • compare 4-digit numbers writing inequality sentences using < and >.
			Lesson 8 Read, write and know what each digit represents in a 4-digit number; Place 4-digit numbers on landmarked number lines (S: Locating numbers between 0 and 1000)	• place 4-digit numbers on landmarked lines • use their knowledge of place-value to estimate the positions of numbers on number lines • order 4-digit numbers using a line.
			Lesson 9 Add 2-digit numbers mentally (partitioning or counting on in 10s and 1s, using number facts etc) Relate this to other appropriate mental additions (S: Say a number between two 4-digit numbers)	• add 2-digit numbers mentally • identify strategies appropriate to the numbers in a calculation.
			Lesson 10 Choose a strategy to subtract 2-digit and 3-digit numbers (count back or count up) (S: Count on and back in 3s and 4s)	• subtract using counting back and counting up • choose an appropriate method to subtract (counting back or counting up) according to the number being

				subtracted.
3	Mental multiplication and division **(MMD)**; Fractions, ratio and proportion **(FRP)**	Learn × and ÷ facts for the 6 and 9x tables and identify patterns; multiply multiples of 10 by 1-digit numbers; multiply 2-digit numbers by 1-digit numbers (the grid method); find fractions of amounts	Lesson 11 Learn × and ÷ facts for the 6 times-table (S: 3 times-table)	• begin to recognise × and ÷ facts for the 6 times-table.
			Lesson 12 Learn × and ÷ facts for the 9 times-table; Identify patterns in the 9 times-table (S: 4 and 8 times-tables)	• spot and describe patterns • begin to know multiplication and division facts for the 9 times-table.
			Lesson 13 Multiply multiples of 10 by a single-digit number, e.g. 60 × 3 (S: 6 times-table)	• use multiplication facts and place-value to multiply multiples of 10 by single-digit numbers.
			Lesson 14 Multiply 2-digit numbers by single-digit numbers, mentally and using the grid method (S: 9 times-table)	• multiply 2-digit numbers by single-digit numbers, mentally and using the grid method.
			Lesson 15 Find unit fractions of amounts (S: Multiplication facts)	• use division to find unit fractions of amounts.
4	Measurement **(MEA)**; Mental addition and subtraction **(MAS)**; Decimals, percentages and their equivalence to fractions **(DPE)**	Tell and write the time to the minute on analogue and digital clocks; calculate time intervals; measure in metres, centimetres and millimetres; convert lengths between units; record using decimal notation	Lesson 16 Tell the time to the minute on analogue and digital clocks; Convert times between analogue and digital clocks (S: Pairs to 60)	• tell time to the minute on digital and analogue clocks • know there are 60 minutes in an hour.
			Lesson 17 Calculate time intervals in minutes – including crossing the hour; Use counting up to calculate time intervals (S: Seconds, minutes and hours)	• calculate time intervals in minutes • tell the time on analogue and digital clocks.
			Lesson 18 Calculate time intervals in minutes – including crossing the hour; Use counting up to calculate time intervals (S: 6 and 8 times-tables)	• calculate time intervals in hours and minutes • tell the time on analogue and digital clocks.
			Lesson 19 Measure in centimetres and millimetres; Understand the relationship between centimetres and millimetres and convert lengths between both units; Record centimetres using decimal notation (S: Rounding 3-digit numbers to nearest 100)	• use a ruler to measure to the nearest cm and mm • estimate lengths in cm and mm • begin to write measurements using decimal notation • recognise relationship between mm/cm/m.
			Lesson 20 Measure in metres, centimetres and millimetres, understanding and using the relationship between them (S: Convert between cm and mm)	• estimate measure and write to nearest m, cm and mm • write measurements using two-place decimal notation, m and cm • convert cm to m and vice versa.
5	Written addition and subtraction **(WAS)**	Add two 3-digit numbers using column addition; subtract a 3-	Lesson 21 Add two 3-digit numbers using written column addition (S: Placing 3-digit numbers on a	• add two 3-digit numbers • understand and use place-value to solve

			number line)	addition, writing it correctly.
			Lesson 22 Add 3-digit numbers using column addition (S: Add 3 numbers)	• add 3-digit numbers using written column method.
	digit number from a 3-digit number using an expanded column method (decomposing only in one column)		Lesson 23 Subtract 3-digit numbers using an expanded column method and decomposing only the 100s column (S: Subtract mentally using number facts)	• subtract 3-digit numbers using written method involving decomposition of the hundreds digit.
			Lesson 24 Subtract 3-digit numbers using an expanded column method and decomposing only in one column (S: Subtract 1-digit numbers from teen numbers)	• subtract 3-digit numbers using expanded written column subtraction (decomposing in one column only).
			Lesson 25 Subtract 3-digit numbers from 3-digit numbers using expanded written column subtraction (decomposing only one column) (S: Read time on analogue and digital clocks)	• subtract a pair of 3-digit numbers using an expanded written method involving decomposition in one column.

Autumn 2

Week	Strands	Weekly summary		
6	Mental multiplication and division **(MMD)**; Fractions, ratio and proportion **(FRP)**	Double 3-digit numbers and halve even 3-digit numbers; revise unit fractions; identify equivalent fractions; reduce a fraction to its simplest form; count in fractions (each fraction in its simplest form)	Lesson 26 Double 3-digit numbers (S: Double 2-digit numbers)	• double 3-digit numbers using partitioning • spot, describe and predict patterns.
			Lesson 27 Halve even 3-digit numbers (S: Halve 2-digit numbers)	• halve even 3-digit numbers using partitioning.
			Lesson 28 Revise concept of unit fractions (S: Find $\frac{1}{4}$ and $\frac{3}{4}$ of multiples of 4)	• compare unit fractions • begin to see fractions equivalent to halves, thirds and quarters.
			Lesson 29 Identity equivalent fractions; Reduce a fraction to its simplest form (S: Fractions with a total of 1)	• identify equivalent fractions • reduce $\frac{1}{4}$s, $\frac{1}{6}$s, $\frac{1}{8}$s and $\frac{1}{10}$s to their simplest forms.
			Lesson 30 Count in fractions expressing each fraction in its simplest form (S: Compare unit fractions)	• count in steps of $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{6}$ and $\frac{1}{10}$ reducing some fractions to their simplest form.
7	Number and place-value **(NPV)**; Written addition and subtraction **(WAS)**; Decimals, percentages and their equivalence to fractions **(DPE)**	Look at place-value in decimals and the relationship between tenths and decimals; add two 4-digit numbers; practise written and mental addition methods; use vertical addition to investigate patterns	Lesson 31 Begin to understand place-value in decimals, recognising the relationship between tenths and decimals, e.g. $\frac{6}{10}$ = 0·6 (S: Counting on and back in ones across multiples of 1000)	• begin to understand the relationship between tenths and decimals • begin to use decimal notation.
			Lesson 32 Begin to understand place-value in decimals by recognising that if we divide a 2-digit number by 10 we may get a decimal number (30 ÷ 10 = 3, 40 ÷ 10 = 4, 35 ÷ 10 = 3·5) (S: Convert tenths into one-place decimal numbers including mixed number)	• multiply and divide whole numbers by 10 • order fractions and decimals including mixed numbers using number lines • use decimal notation.
			Lesson 33 Add two 4-digit numbers, not crossing 10,000 (S: Place-value in 4-digit numbers)	• add two 4-digit numbers using written method.

			Lesson 34 Practise written methods for addition; Choose to use written or mental methods to add numbers (S: Add near multiples by rounding and adjusting)	• make sensible choices between mental and written methods for addition.
			Lesson 35 Use written column addition to investigate patterns in numbers (S: Adding pairs of 1-digit numbers)	• use logical thinking to look for patterns • add 3-digit and 4-digit numbers using column addition.
8	Measurement **(MEA)**; Statistics **(STA)**	Convert multiples of 100g into kilograms; convert multiples of 100ml into litres; read scales to the nearest 100ml; estimate capacities; draw bar charts, record and interpret information	Lesson 36 Convert between multiples of 100g and kilograms; Read scales to the nearest 100g (S: Telling the time)	• weigh items to the nearest 100,g • convert multiples of 100,g to kilograms and vice versa, e.g. 600,g to 0·6,kg.
			Lesson 37 Read scales to the nearest 100g; Draw a bar chart where one step represents 100 (S: Reading scales)	• choose likely weights for given items • draw a bar chart to show weight.
			Lesson 38 Record and interpret information on bar charts (S: Place 3-digit numbers on an empty 0 to 1000 line)	• answer a question by collecting, displaying and interpreting data in a frequency table and bar chart, choosing an appropriate scale.
			Lesson 39 Convert between multiples of 100ml and litres; Read scales to the nearest 100ml (S: Bonds to 100)	• measure capacity to the nearest 100,ml • convert multiples of 100,ml to litres and vice versa, e.g. 600,ml to 0·6 litres.
			Lesson 40 Convert between multiples of 100ml and litres; Read scales to the nearest 100ml; Estimate capacities (S: Times-tables)	• measure capacity to the nearest 100,ml. • estimate capacity using 200,ml cup and 1 litre container as benchmark.
9	Number and place-value **(NPV)**; Mental addition and subtraction **(MAS)**; Written addition and subtraction **(WAS)**	Round 4-digit numbers to the nearest: 10, 100 and 1000; subtract 3-digit numbers using the expanded written version and the counting up mental strategy and decide which to use	Lesson 41 Round 4-digit numbers to the nearest 10, 100 and 1000 (S: Place 4-digit numbers on a line)	• round 4-digit numbers to the nearest 10, 100 and 1000.
			Lesson 42 Subtract 3-digit numbers using written subtraction, expanded version only (S: Subtraction facts)	• use a written method to subtract pairs of 3-digit numbers.
			Lesson 43 Subtract 3-digit numbers using expanded written column subtraction (S: 4 and 8 times-tables)	• subtract 3-digit numbers using expanded written subtraction.
			Lesson 44 Use counting up as a mental subtraction strategy where the larger number has one or more zeros; Use expanded written column subtraction to perform appropriate subtractions; Decide whether to use mental or written subtraction (S: Bonds to 100)	• use counting up as a strategy to perform mental subtraction where the larger number has one or more zeros • decide when it is easier/more efficient to count up to solve subtractions rather than use a written column method.
			Lesson 45 Choose and use methods of subtraction to solve 3-digit subtractions (S: 3 and 6 times-tables)	• use both expanded written column subtraction and counting up to solve subtractions

Week	Strands	Weekly summary		
				• decide when to use which method.
10	Mental multiplication and division **(MMD)**; Written multiplication and division **(WMD)**	Use the grid method to multiply 3-digit by 1-digit numbers and introduce the vertical algorithm; begin to estimate products; divide numbers (up to 2 digits) by 1-digit numbers with no remainder, then with a remainder	Lesson 46 Use the grid method to multiply 3-digit numbers by single-digit numbers (S: Multiply multiples of 10 and multiples of 100 by single-digit numbers)	• use the grid method to multiply 3-digit numbers by single-digit numbers.
			Lesson 47 Use the grid method to multiply 3-digit numbers by single-digit numbers; Begin to estimate products (S: 9 times-table)	• multiply 3-digit numbers by single-digit numbers using the grid method • begin to estimate answers to 3-digit numbers multiplied by 1-digit numbers.
			Lesson 48 Use the vertical algorithm to multiply 3-digit numbers by single-digit numbers (S: Times-tables)	• use the vertical algorithm to multiply 3-digit numbers by single-digit numbers.
			Lesson 49 Divide numbers just beyond known times-tables by single-digit numbers where there is no remainder (S: Division facts)	• divide numbers just beyond known times-tables by single-digit numbers where there is no remainder.
			Lesson 50 Divide 2-digit numbers just beyond known times-tables by single-digit numbers including those which leave a remainder (S: Recognise multiples of 4 and 6)	• divide 2-digit numbers just beyond known times-tables by single-digit numbers including those which leave a remainder.
Spring 1				
Week	**Strands**	**Weekly summary**		
11	Number and place-value **(NPV)**	Place 4-digit numbers on landmarked lines; 0-10,000 and 1000-2000; round 4-digit numbers to the nearest 10, 100 and 1000; mentally add and subtract to/from 4-digit and 3-digit numbers using place-value; count on and back in multiples of 10, 100 and 1000; count on in multiples of 25 and 50; add and subtract multiples of 10 and 100 to/from 4-digit numbers	Lesson 51 Place 4-digit numbers on landmarked lines and round 4-digit numbers to the nearest 10, 100 and 1000 (S: Place 3-digit numbers on a 100 empty number line)	• locate 4-digit numbers on a 0–10,000 line and on a 1000 line • round 4-digit numbers to the nearest 1000, 100 and 10.
			Lesson 52 Mentally add and subtract to/from 4-digit and 3-digit numbers using place-value (S: Count back in 1s over a 1000s bridge)	• solve additions and subtractions mentally using place-value • count back in 1s across multiples of 10, 100 and 1000 to solve subtractions.
			Lesson 53 Count on and back in multiples of 10, 100 and 1000 and in multiples of 25 and 50 (S: Compare 4-digit numbers using < and > signs)	• count on and back in 10s, 100s, 1000s • count on and back in 50s and 25s • identify patterns in numbers and explain them using the relationship between the numbers and their knowledge of place-value.
			Lesson 54 Add multiples of 10 and 100 to 4-digit numbers (S: Counting on in 10s and 100s)	• add multiples of 10 to 4-digit numbers • add multiples of 100 to 4-digit numbers.
			Lesson 55 Subtract multiples of 10 and 100 from 4-digit numbers (S: Counting back in 10s and 100s)	• subtract multiples of 10 from 4-digit numbers • subtract multiples of 100 from 4-digit numbers.

12	Mental multiplication and division **(MMD)**; Written multiplication and division **(WMD)**; Written addition and subtraction **(WAS)**; Measurement **(MEA)**	Use expanded written subtraction and compact written subtraction to subtract pairs of 3-digit numbers (one 'exchange'); use expanded column subtraction and compact column subtraction to subtract pairs of 3-digit and 2-digit numbers from 3-digit numbers (one 'carry'); learn the 7x table and 'tricky' facts; use the vertical algorithm to multiply 3-digit numbers by 1-digit numbers	Lesson 56 Use expanded written subtraction, and begin to use compact written subtraction, to subtract pairs of 3-digit numbers (one 'exchange') (S: Count in steps of 1/8 and 1/10)	• begin to use the compact method of column subtraction (decomposition) to solve subtractions requiring one 'exchange'.
			Lesson 57 Use expanded column subtraction and begin to use compact column subtraction to subtract pairs of 3-digit numbers and 2-digit numbers from 3-digit numbers (one 'exchange') (S: Equivalent fractions)	• use expanded written subtraction and begin to use compact written subtraction to subtract pairs of 3-digit numbers and 2-digit numbers from 3-digit numbers (one 'exchange').
			Lesson 58 Begin to learn the 7 times-table and learn 'tricky' facts (S: Times-tables)	• know the 7 times-table • know other 'tricky' facts, e.g. 6×8, 7×8 and 6×7.
			Lesson 59 Use the vertical algorithm to multiply 3-digit numbers by 1-digit numbers (S: 7 times-table)	• use the vertical algorithm to multiply 3-digit numbers by 1-digit numbers • use grid method to multiply 3-digit numbers by 1-digit numbers.
			Lesson 60 Use the vertical algorithm to multiply 3-digit numbers, including amounts of money, by 1-digit numbers (S: 70 times-table)	• use the vertical algorithm to multiply 3-digit numbers, including amounts of money, by 1-digit numbers.
13	Mental multiplication and division **(MMD)**; Fractions, ratio and proportion **(FRP)**	Use mental multiplication and division strategies; find non-unit fractions of 2-digit and 3-digit numbers; find equivalent fractions and use them to simplify fractions (halves, thirds, quarters)	Lesson 61 Mental multiplication and division strategies (S: Double and halve 2-digit numbers)	• multiply and divide by 4 by doubling/or halving twice • multiply by 5 by multiplying by 10 and halving • multiply by 20 by doubling and multiplying by 10.
			Lesson 62 Find non-unit fractions of 2-digit numbers (S: Add pairs of 2-digit numbers)	• find non-unit fractions of 2-digit numbers, e.g. $\frac{5}{6}$ of 42.
			Lesson 63 Find non-unit fractions of 2- and 3-digit numbers (S: Subtract pairs of 2-digit numbers)	• find non-unit fractions of larger numbers and multiples of 10.
			Lesson 64 Find equivalent fractions for halves, thirds and quarters (S: Place fractions on a line)	• identify equivalent fractions, particularly those equivalent to one-half, one-third and one-quarter • begin to compare fractions with non-like denominators.
			Lesson 65 Use equivalent fractions to simplify fractions (S: Count in steps of $\frac{1}{6}$)	• simplify fractions using equivalent fractions.
14	Geometry: properties of shape **(GPS)**	Recognise and compare acute, right and obtuse angles;	Lesson 66 Recognise acute, right and obtuse angles and compare angles (S: 7 times-table)	• identify right angle, acute and obtuse angles.

Week	Strands	Weekly summary		
		draw lines of a given length; identify perpendicular and parallel lines; recognise and draw line symmetry in shapes; sort 2D shapes according to their properties; draw shapes with given properties; draw the other half of symmetrical shapes	Lesson 67 Draw lines of a given length and identify perpendicular and parallel lines (S: Count on and back in multiples of 10 and 100 through multiples of 1000)	• draw lines to a given length • recognise perpendicular and parallel lines.
			Lesson 68 Revise line symmetry in shapes and sort 2D shapes according to their properties, including the number of right angles, perpendicular and parallel lines and lines of symmetry (S: Draw perpendicular and parallel lines)	• describe the properties of 2D shapes • sort 2D shapes using given criteria.
			Lesson 69 Draw shapes with given properties (S: Know equivalent digital and analogue times)	• draw shapes with given properties, e.g. acute/obtuse angles, parallel/perpendicular sides.
			Lesson 70 Draw lines of symmetry and draw the other half of symmetrical shapes (S: Divide by 10)	• draw lines of symmetry • draw the other half of symmetrical shapes.
15	Mental multiplication and division **(MMD)**; Written multiplication and division **(WMD)**; Mental addition and subtraction **(MAS)**	Understand how to divide 2-digit and 3-digit numbers by 1-digit numbers using place-value and mental strategies; divide numbers by 1-digit numbers to give answers between 10 and 25, with remainders; identify factor pairs and use these to solve multiplications and divisions with larger numbers; use Frog to find complements to multiples of 1000; use Frog to find change from £10, £20 and £50	Lesson 71 Understand how to divide 2-digit and 3-digit numbers using mental strategies and using the fact that multiplication and division are inverses (S: Division facts for 3 and 6 times-tables)	• use mental strategies and tables facts to divide larger numbers by single-digit numbers to give answers of between 10 and 25, with no remainders.
			Lesson 72 Divide numbers by single-digit numbers to give answers of between 10 and 25, with remainders (S: Division facts for 4 and 8 times-tables)	• use mental strategies and tables facts to divide numbers by single-digit numbers to give answers of between 10 and 25, with remainders.
			Lesson 73 Identify factor pairs and use these to solve multiplication and division of larger numbers (S: Division facts for 7 and 9 times-tables)	• identify factor pairs for multiples of numbers within the times-tables • use factor pairs to help them solve multiplications and divisions involving larger numbers.
			Lesson 74 Find complements to multiples of 1000 by counting up and using complements to 100 (S: Bonds to 100)	• find complements to multiples of 1000 by counting up using complements to 100.
			Lesson 75 Find change from £10, £20 and £50 by counting up (S: How many more to make the next pound?)	• use counting up to find change from £10 and £20 • make an amount of change using real coins.
Spring 2				
Week	**Strands**	**Weekly summary**		
16	Decimals, percentages and their equivalence to fractions **(DPE)**; Number and place-	Recognise, use, compare and order decimal numbers; understand place-value in decimal numbers; recognise	Lesson 76 Recognise and use decimal numbers, understanding place value in decimal numbers and recognising that the first decimal place is tenths (S: Tell the time on analogue and digital clocks)	• recognise and use decimal notation • understand a decimal is a tenth.

		that decimals are tenths; round decimals numbers to the nearest whole number; divide 2-digit numbers by 10 to get decimal numbers; multiply decimal numbers by 10 to get 2-digit numbers; divide 3-digit multiples of ten by 100 to get decimal numbers; multiply decimal numbers by 100 to get 3-digit multiples of ten; add 4-digit numbers using written method with answers greater than 10,000	Lesson 77 Compare and order decimal numbers and round decimals numbers to the nearest whole number (S: Placing decimals on empty number line)	• compare one-place decimals and complete greater than and less than sentences • round one-place decimals to nearest whole number.
value **(NPV)**; Written addition and subtraction **(WAS)**			Lesson 78 Divide 2-digit numbers by 10 and 3-digit multiples of 10 by 100 to get decimal numbers and multiply decimal numbers by 10 / 100 to get 2-digit / 3-digit numbers (S: Place-value additions of decimals)	• divide 2-digit numbers by ten and 3-digit multiples of ten by a hundred to get decimal answers. Multiply decimals by ten and hundred • understand place-value of one place decimals.
			Lesson 79 Add 4-digit numbers with answers greater than 10#000 using a written method and solve addition word problems (S: Rounding 4-digit numbers to the nearest 1000)	• add 4-digit numbers using written method where answers are greater than 10000.
			Lesson 80 Add 4-digit numbers using written method with answers greater than 10,000 (S: Adding 4-digit numbers mentally)	• add 4-digit numbers using written addition with answers greater than 10,000 and having to move tens, hundreds & thousands • read and interpret addition word problems.
17	Mental addition and subtraction **(MAS)**; Written addition and subtraction **(WAS)**; Decimals, percentages and their equivalence to fractions **(DPE)**	Add amounts of money using written methods and mentally using place-value and number facts; choose to add using the appropriate strategy: mental or written; subtract, choosing appropriate mental strategies: counting up or taking away (using counting back, place-value or number facts); solve subtractions using a suitable written method (column subtraction)	Lesson 81 Add amounts of money mentally using place value and number facts (S: Mentally add 3 or 4 single-digit numbers)	• add amount of money using mental strategies • know number facts e.g. bonds to all numbers from 1 to 20.
			Lesson 82 Add amounts of money using mental and written methods and choose whether to add mentally or use a written method (S: Revise decimals by placing 1-place decimals on a 0-10 number line)	• decide whether to use written or mental method to solve addition • add several numbers.
			Lesson 83 Subtract, choosing an appropriate mental strategy (S: Counting on and back in 10p)	• solve subtractions of amounts of money mentally • choose appropriate method for solving mental subtraction (count up or take-away).
			Lesson 84 Solve subtraction using a written column method (S: Adding to the next pound)	• subtract using a written column method • use a methodical, systematic approach to investigating and reasoning.
			Lesson 85 Choose to use a suitable written method to solve particular subtractions (S: Telling the time on analogue and digital clocks)	• decide the appropriate method to solve a subtraction either Column method or counting up (Frog)

					• subtract using counting up (Frog) • subtract using Column method
18	Measurement **(MEA)**	Tell the time on a 24-hour clock, using am and pm correctly; convert pm times to 24-hour clock and vice versa; use 24-hour clock in calculating intervals of time; measure and calculate perimeters of rectilinear shapes where each side is labelled in cm and m; find missing lengths in rectilinear composite shapes; find the perimeters of rectilinear shapes with some lengths not marked; convert from one unit of length to another; solve word problems involving lengths including those involving perimeters	Lesson 86 Tell the time on a 24-hour clock, use am and pm correctly, convert pm times to 24-hour clock and vice versa (S: Place 4-digit numbers on a line)		• relate analogue pm times to digital 24 hour clock • read and understand 24 hour clock digital times.
			Lesson 87 Use 24-hour clock in calculating intervals of time and in understanding am and pm (S: Angles as turn)		• relate analogue to digital time using the 24 hour clock • understand am and pm • calculate time intervals using the 24 hour clock.
			Lesson 88 Measure and calculating perimeter of rectilinear shapes where each side is labelled in cm and m (S: Times-tables – division facts)		• find the perimeter of a rectangle by calculation • find the perimeter of a rectilinear shape by calculation.
			Lesson 89 Find missing lengths in rectilinear composite shapes and the perimeters of rectilinear shapes with some lengths not marked (S: Telling the time using 24 hour clocks)		• find missing lengths in rectilinear shapes using the fact that opposite sides of a rectangle are equal • find the perimeter of rectilinear shapes.
			Lesson 90 Convert from one unit of length to another and solve word problems involving mixed units of length (S: Compare 4-digit numbers)		• convert between SI units of length • solve word problems involving length.
19	Number and place-value **(NPV)**; Written addition and subtraction **(WAS)**; Mental addition and subtraction **(MAS)**	Understand place value in 4-digit numbers; partition 4-digit numbers; solve subtraction of 4-digit numbers using column subtraction (decomposition); choose an appropriate method to solve subtractions, either mental or written, and either column or counting up (Frog)	Lesson 91 Understand place value in 4-digit numbers, and partition 4-digit numbers (S: Subtract 4-digit numbers (close to multiples of thousand) using counting up (Frog))		• read and write 4-digit numbers knowing what each digit represents • partition 4-digit numbers into thousands, one thousand and the hundreds and then the tens and ones, i.e. 5821 = 4000 + 1800 + 21.
			Lesson 92 Solve subtraction of 4-digit numbers using column subtraction (decomposition) (S: Subtracting multiples of ten)		• use column subtraction to solve 4-digit – 4-digit, decomposing in two columns (ones and tens).
			Lesson 93 Solve subtraction of 4-digit numbers using column subtraction (decomposition) (S: Subtracting multiples of 100)		• solve 4-digit subtractions using written method.
			Lesson 94 Solve subtraction of 4-digit numbers using column subtraction (decomposition) (S: Compare 4-digit numbers, use < & > sentences)		• solve 4-digit subtractions using the written method • solve 4-digit subtractions using Frog
			Lesson 95 Choose an appropriate method to solve subtractions: either mental or written, and either column		• choose appropriate methods, mental or written, for solving subtractions

			of counting up (Frog) (S: Rehearsing multiplication tables)	• solve subtractions using written and mental strategies.
20	Written multiplication and division **(WMD)**	Use the ladder method to multiply 3-digit numbers by 1-digit numbers; explore patterns; use mental strategies and tables facts to divide 2-digit and 3-digit numbers by 1-digit numbers to give answers between 10 and 35, without remainders; solve word problems	Lesson 96 Use the ladder method to multiply 3-digit numbers by a single-digit number (S: Multiply multiples of 1000 by single-digit numbers)	• use a written method to multiply 3-digit numbers by single-digit numbers.
			Lesson 97 Use the ladder method to multiply 3-digit numbers by single-digit numbers and explore patterns (S: 'Tricky' multiplication facts)	• use a written method to multiply 3-digit numbers by single-digit numbers • notice patterns, make and test predictions.
			Lesson 98 Use mental strategies and tables facts to divide 2-digit and 3-digit numbers by single-digit numbers to give answers of between 10 and 35, without remainders (S: Mental multiplication using partitioning)	• divide 2-digit and 3-digit numbers by single-digit numbers using mental strategies and times-tables facts, without remainders • understand that multiplication and division are inverse operations.
			Lesson 99 Use mental strategies and tables facts to divide 2-digit and 3-digit numbers by single-digit numbers to give answers of between 10 and 35, with remainders (S: Divide 3-digit multiples of 10 by 10 and by 100)	• use mental strategies to divide numbers by single-digit numbers, with remainders • understand that multiplication and division are inverse operations.
			Lesson 100 Solve word problems, choosing the necessary calculation to solve them (S: Equivalence in multiplication)	• identify the calculation(s) needed to solve a word problem.
Summer 1				
Week	**Strands**	**Weekly summary**		
21	Number and place-value **(NPV)**	Read, write and compare 4-digit numbers, writing numbers in between and placing them on a line; find 1000 more or less than any given number; read, write and compare 5-digit numbers; recognise what each digit represents in a 5-digit number; read, use and compare negative numbers in the context of temperature	Lesson 10.1 Read, write and compare 4-digit numbers, writing numbers in between; Place 4-digit numbers on a line (S: Count on and back in tens (across multiples of 1000))	• read, write and compare 4-digit numbers • place 4-digit numbers on a line • generate numbers between two 4-digit numbers.
			Lesson 102 Read, write and compare 4-digit numbers, writing numbers in between; Place 4-digit numbers on a line; Find 1000 more or less than any given number (S: Multiply and divide by ten and a hundred)	• read, write and compare 4-digit numbers • say the number 100 more/less, 1000 more/less than any 4-digit multiple of 100.
			Lesson 103 Begin to read, write and compare 5-digit numbers; Recognise what each digit represents in a 5-digit number; Find 1000 more or less than any given number (S: Write a number between two 4-digit numbers)	• begin to read and write 5-digit numbers • understand what each digit represents in a 5-digit number.
			Lesson 104 To read, use and compare negative numbers in the context of temperature (S: Bonds to the	• read, use and compare negative numbers in the context of temperatures

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			next hundred)	• begin to understand negative numbers are lower/smaller the greater the digits e.g. -21 is less than -12.
			Lesson 105 To read, use and compare negative numbers (S: Find factor pairs of numbers)	• read, use and compare negative numbers in the context of temperature & money • understand negative numbers are lower/smaller the greater the digits e.g. -21 is less than -12.
22	Decimals, percentages and their equivalence to fractions **(DPE)**	Multiply and divide numbers by 10 and 100 including decimals (tenths and hundredths); read and write decimals (to 1 and 2 places), understanding that these represent parts (tenths and hundredths) of numbers; mark one and two place decimals on a line; count in tenths (0.1s) and hundredths (00.1s); say the number one tenth (0.1) and one hundredth (00.1) more or less than a given number; round decimal numbers to the nearest whole number	Lesson 106 Multiply and divide numbers by 10 & 100 including decimals (tenths and hundredths); Read and write decimals (to 1 & 2 places), understanding that these represent parts (tenths & hundredths) of numbers (S: Compare 1-place decimals (less than 1))	• read, write and compare decimal numbers (to 1- or 2-places) • multiply and divide numbers by ten and hundred understanding this involves a shift of the digits (can be on a PV 100s/10s/1s grid).
			Lesson 107 Read and write decimals (to 1 & 2 places) understanding these represent parts (tenths & hundredths) of numbers; Multiply and divide numbers by 10 & 100 including decimals (1- & 2-place) (S: Add two 2-digit numbers)	• read, write and compare decimal numbers to 2-places • understand decimals represent tenths and hundredths (parts) of whole numbers.
			Lesson 108 Read and write decimals (to 1 & 2 places) understanding these represent parts (tenths & hundredths) of numbers; Mark one and two place decimals on a line; Add to a one place decimal to get the next tenth (S: Add whole numbers to 1-place decimals)	• read, write and compare decimal numbers to 2-places • place 1-place and 2-place decimals on a line • understand decimals represent tenths and hundredths (parts) of whole numbers • begin to add to the next whole number.
			Lesson 109 Read and write decimals (to 1 & 2 places) understanding these represent parts (tenths & hundredths) of numbers; Count in tenths (0.1s) and hundredths (00.1s); Say the number one tenth (0.1) more or less than a given number; Say the number one hundredth (00.1) more or less than a given number (S: Identify tenths and hundredths in 2-place mixed decimal numbers)	• read, write and compare decimals using decimal notation to 2-places • count on and back in 0.1s (tenths) • begin to count on and back in 0.01s (hundredths).
			Lesson 110 Read and write decimals (to 1 & 2 places) understanding these represent parts (tenths & hundredths) of numbers; Round decimal numbers to the nearest whole number (S: Divide numbers by 10 to get	• read, write, compare and order decimals (1-place) • find decimal numbers between 2 numbers

				• round 1-place decimals to the nearest whole number.
23	Mental multiplication and division **(MMD)**; Written multiplication and division **(WMD)**; Number and place-value **(NPV)**	Learn 11 and 12x tables; develop and use effective mental multiplication strategies; use a vertical written method to multiply 3-digit numbers by 1-digit numbers; use rounding to estimate answers; use a written method to multiply 3-digit numbers, including amounts of money by 1-digit numbers; multiply 2-digit and 3-digit numbers by 1-digit numbers; understand how division 'undoes' multiplication and vice versa; divide above the tables facts using multiples of ten	Lesson 111 Learn 11 and 12 times-tables (S: Mark one place decimals on a line)	• know their 11 times-table • begin to know their 12 time table • spot patterns.
			Lesson 112 Develop and use effective mental multiplication strategies (S: Tell the time on analogue clocks)	• multiply two-digit numbers or 3-digit numbers by 1-digit numbers, mentally, using jottings where necessary • use a mental strategy to multiply by 4, 5 or 8.
			Lesson 113 Use the vertical algorithm to multiply 3-digit numbers by single-digit numbers; Use rounding to estimate answers (S: 4 and 8 times-tables)	• use a vertical algorithm to multiply 3-digit numbers by single-digit numbers • use rounding to make a rough approximation.
			Lesson 114 Use a written method to multiply 3-digit numbers, including amount of money, e.g. £465, by single-digit numbers; Use rounding to estimate answers (S: Factor pairs)	• chn approximate when multiplying • use a vertical algorithm to multiply 3-digit numbers by single-digit numbers • use a written method to multiply amounts of money by single-digit numbers, e.g. 4 × £4.67.
			Lesson 115 Multiply 2-digit and 3-digit numbers by single-digit numbers; Understand how division 'undoes' multiplication and vice versa; Divide above the tables facts using multiples of ten (S: Find time intervals)	• understand how division 'undoes' multiplication and vice versa • multiply and divide 2-digit numbers.
24	Number and place-value **(NPV)**; Geometry: properties of shapes **(GPS)**; Measurement **(MEA)**	Recognise and write Roman numerals to 100; begin to know the history of our number system including zero; calculate area and perimeter of rectangles and simple rectilinear shapes using addition and multiplication; recognise, name and classify 2D shapes identifying polygons, regular and irregular; sort 2D and 3D shapes according to properties	Lesson 116 Recognise and write Roman numerals to 100; Begin to know the history of our number system including zero (S: Write 5-digit numbers in numerals and words)	• read and write Roman numerals to 50? 100? • have an understanding of where our number system came from and that we used Roman Numerals before.
			Lesson 117 Calculate area of rectangles and simple rectilinear shapes using counting and multiplication (S: Multiply and divide by ten and a hundred)	• calculate area of rectangles using counting or multiplication • calculate area of simple rectilinear shapes using counting or multiplication • understand area is the measurement of how many squares a shape covers with its surface? (Squares in this case being cm^2 and m^2).

			Lesson 118 Calculate area and perimeter of rectilinear shapes using multiplication and addition (or counting for those who struggle with the concept) (S: Revise Roman Numerals)	• calculate area of simple rectilinear shapes using the fact they are comprised of two rectangles • calculate perimeter of rectilinear shapes using doubling, and addition • understand the difference between area and perimeter and use appropriate measures (i.e. m^2 and cm^2 for area and cm & m for perimeter).
		including types of quadrilaterals and triangles; revise 3D shapes; look at 2D shaped sides on 3D shapes	Lesson 119 Recognise, name and classify 2D shapes identifying polygons, regular and irregular; Sort 2D shapes according to properties including types of quadrilaterals and triangles (S: Read and interpret a bar graph)	• name and describe common 2D shapes including using the terms: polygon, triangle, quadrilateral, pentagon, hexagon, and octagon • identify properties of shapes using terms: angle, right angle; sides; vertices; parallel; regular, irregular, opposite • begin to classify and name different types of quadrilateral and triangles.
			Lesson 120 Revise 3D shape, look at 2D shaped sides on 3D shapes – sort shapes according to faces, vertices, edges (S: Know the relationship between seconds and minutes, minutes and hours)	• name and describe properties of 3D shapes; sphere, cylinder, cone, cube, cuboid, triangular prism, triangular pyramid, square based pyramid and hexagonal prism.
25	Decimals, percentages and their equivalence to fractions **(DPE)**; Fractions, ratio and proportion **(FRP)**	Understand, read and write two place decimals; compare two place decimals in the context of lengths; add and subtract 0.1 and 00.1; say a number one tenth (0.1) and one hundredth (00.1) more or less than a given number; revise equivalent fractions; write fractions with different denominators with a total of 1; recognise decimal and fraction equivalents	Lesson 121 Understand, read and write two place decimals (S: Pairs with a total of 1)	• write lengths in metres to two decimal places.
			Lesson 122 Comparing two-place decimals in the context of lengths (S: Compare amounts of money)	• compare numbers with two decimal places in the context of length.
			Lesson 123 Add and subtract 0.1 and 0.01 Say a number one tenth (0.1) more or less than a given number; Say a number one hundredth (0.01) more or less than a given number (S: Count on steps of 0.1)	• add and subtract 0.1 to numbers with one decimal place • add and subtract 0.01 to numbers with two decimal places.
			Lesson 124 Revise equivalent fractions; Write fractions with different denominators with a total of 1 (S: Factor pairs)	• identify equivalent fractions • write additions of fractions with different denominators with a total of 1.
			Lesson 125 Recognise decimal and fraction equivalents (S: Count in steps of 25)	• know decimals equivalents for 1/10, ¼, ½,and ¾ • write lengths in fractions as decimals and in metres and centimetres • solve problems involving length.

Summer 2

Week	Strands	Weekly summary		
26	Mental addition and subtraction **(MAS)**; Mental multiplication and division **(MMD)**; Written multiplication and division **(WMD)**	Mentally add a 2-digit number to a 2-, 3- or 4-digit number; subtract 2-, 3-, and 4-digit numbers using counting up (Frog); derive factors of 2-digit numbers; use factors and doubling to solve multiplication mentally; solve division using mental strategies; understand division is multiplication with holes, i.e. 3 × ? = 12 therefore 12 ÷ 3 = ?; understand that division and multiplication are inverse operations; solve word problems, including 2-step problems, choosing an appropriate method	Lesson 126 Mentally add any two 2-digit numbers; mentally add a 2-digit number to a 3-digit or a 4-digit number (S: Number bonds to 100)	• add 2-digit numbers mentally to 2-, 3-, & 4-digit numbers • use mental strategies for adding.
			Lesson 127 Subtract 2-, 3-, & 4-digit numbers using counting up (Frog) (S: Add to the next hundred)	• solve subtractions of 3- & 4-digit numbers using counting up (Frog) • use knowledge of bonds to 100 or bonds to 10 & multiple of 10 bonds to 100 to count up efficiently.
			Lesson 128 Derive factors of 2-digit numbers; Use factors and doubling to solve multiplication mentally (S: Multiply by 4 by doubling twice)	• solve multiplications using mental strategies including using factors • use doubling and multiplying by three to solve multiplications mentally.
			Lesson 129 Solve division using mental strategies; Understand division is multiplication with holes, i.e. 3 x ? = 12 therefore 12 ÷ 3 = ?; Understand that division and multiplication are inverse operations (S: Find factor pairs)	• divide using mental strategies • divide by 2, 4 and 8 using halving, once, twice and three times.
			Lesson 130 Solve word problems, including 2-step problems, choosing an appropriate method (S: Simplify fractions)	• solve word problems using addition, subtraction, multiplication or division • use mental strategies to solve calculations.
27	Written addition and subtraction **(WAS)**; Mental addition and subtraction **(MAS)**	Solve written addition of two 4-digit numbers; add amounts of money (pounds and pence) using column addition; solve 4-digit subtractions using written column method (decomposition) or counting up (Frog); solve 4-digit – 3-digit subtractions using written column method (decomposition); check subtraction using addition; solve word problems choosing an appropriate method	Lesson 131 Solve written addition of two 4-digit numbers (S: Order 4-digit numbers and say numbers between)	• add two 4-digit numbers using column addition (compact or expanded) • use logical reasoning to create additions of 4-digit numbers to a given total.
			Lesson 132 Add amounts of money pounds and pence using column addition (S: Complements to the next pound)	• add amounts of money using column addition.
			Lesson 133 Solve 4-digit subtractions using written column method (decomposition) or counting up (Frog) where appropriate (S: Add to the next multiple of 100)	• subtract 4-digit numbers using column subtraction (decomposition) • begin to check their answers using addition.
			Lesson 134 Solve 4-digit subtractions using written column method; Solve 4-digit – 3-digit subtractions using written column method (decomposition); Check subtraction using addition (S: Subtract 1-digit numbers from teen numbers)	• subtract 4-digit numbers using column subtraction (decomposition) • begin to check their answers using addition.

			Lesson 135 Solve word problems choosing an appropriate method (S: Know the relationship between km, m, cm & mm and use to convert measures)	• find change from amounts of pounds by counting up • solve subtraction problems involving amounts of money.
28	Geometry: position and direction **(GPD)**; Statistics **(STA)**	Use co-ordinates to draw polygons; find the co-ordinates of shapes after translation; draw and interpret bar charts and pictograms; draw line graphs and understand that intermediate points have meaning	Lesson 136 Use co-ordinates to draw polygons (S: Answer subtractions with negative answers)	• use co-ordinates in the first quadrant • recognise simple irregular polygons.
			Lesson 137 Find the co-ordinates of shapes after translation (S: Factor pairs)	• translate a polygon and write the co-ordinates of its new position.
			Lesson 138 Draw and interpret bar charts and pictograms (S: Count back in 10s crossing multiples of 100 and 1000)	• read and interpret pictograms where one symbol represents two units • read and interpret bar charts where one step represents two units.
			Lesson 139 Draw line graphs and understand that intermediate points have meaning (S: Understand shape vocabulary)	• draw a line graph • use it to work out intermediate values.
			Lesson 140 Draw line graphs and understand that intermediate points have meaning (S: Symmetrical shapes)	• draw a line graph • use it to work out intermediate values.
29	Written multiplication and division **(WMD)**; Fractions, ratio and proportion **(FRP)**; Decimals, percentages and their equivalence to fractions **(DPE)**	Use the vertical algorithm (Ladder) to multiply 3-digit numbers by 1-digit numbers; find non-unit fraction of amounts, using 'chunking'; add fractions with like denominators, including totals greater than 1; divide by 10 and 100 (to give answers with 1 and 2 decimal places)	Lesson 141 Use the vertical algorithm (Ladder) to multiply 3-digit numbers by single-digit numbers (S: Times-tables)	• use a vertical algorithm to multiply 3-digit numbers by single-digit numbers • use rounding to make a rough approximation.
			Lesson 142 Use the vertical algorithm (Ladder) to multiply 3-digit numbers by single-digit numbers (S: Counting back through zero in repeated steps)	• sustain a line of enquiry, make a and test a hypothesis • use the Ladder method to multiply 3-digit numbers by single-digit numbers.
			Lesson 143 Find non-unit fraction of amounts, using 'chunking' (S: Equivalent fractions)	• find non-unit fractions of amounts.
			Lesson 144 Add fractions with like denominators, including totals greater than 1 (S: Count in tenths)	• add fractions with the same denominator including those with an answer greater than 1 • begin to convert improper fractions to mixed numbers.
			Lesson 145 Divide by 10 and 100 (to give answers with 1 and 2 decimal places) (S: Count in tenths and hundredths)	• multiply and divide 1-digit and 2-digit numbers by 10 and by 100 to give whole numbers answers or answer with one or two decimal places.
30	Written multiplication and division **(WMD)**;	Multiply 2-digit numbers by 11 and 12; look for patterns and	Lesson 146 Multiply 2-digit numbers by 11 and 12; Look for patterns and write rules (S: Double 2-digit numbers)	• multiply 2-digit numbers by 11 and 12 • look for patterns and write rules.

	Mental multiplication and division **(MMD)**; Fractions, ratio and proportion **(FRP)**	write rules; multiply 2-digit numbers by numbers between 10 and 20 using the grid method; begin to use the grid method to multiply pairs of 2-digit numbers; use mental strategies and tables facts to divide 2-digit and 3-digit numbers by 1-digit numbers to give answers between 20 and 50, with and without remainders; find non-unit fractions of amounts	Lesson 147 Multiply 2-digit numbers by numbers between 10 and 20 using the grid method (S: Multiply multiples of 10 by single-digit numbers)	• use the grid method to multiply 2-digit numbers by numbers between 10 and 20.
			Lesson 148 Begin to use the grid method to multiply pairs of 2-digit numbers (S: Divide by 4 by halving twice)	• begin to multiply pairs of 2-digit numbers together using the grid method
			Lesson 149 Use mental strategies and tables facts to divide 2-digit and 3-digit numbers by single-digit numbers to give answers of between 20 and 50, with and without remainders (S: Use knowledge of multiplication facts and place-value in mental multiplication)	• use mental strategies and tables facts to divide 2-digit and 3-digit numbers by single-digit numbers to give answers of between 20 and 50, with and without remainders • use multiplication to check their answers.
			Lesson 150 Find non-unit fractions of amounts (S: Find 1/10 and 1/100 of amounts)	• find unit fractions of amounts and use multiplication to check • find non-unit fractions of amounts.