The Lanes PRIMARY SCHOOL

Year 5 Long Term Plan 2021-2022

Term	Stand	Unit	Number of lessons
TERM 1	Number – number and place value	Place value within 100,000	8
	Number – number and place value	Place Value within 1,000, 000	8
	Number – addition and subtraction	Addition and Subtraction	10
	Statistics	Graphs and Tables	5
	Number – multiplication and division	Multiplication and Division	10
	Measurement	Measure – area and perimeter	7
TERM 2	Number – multiplication and division	Multiplication and division	11
	Fractions (including decimals and percentages)	Fractions	8
	Fractions (including decimals and percentages)	Fractions	12
	Fractions (including decimals and percentages)	Fractions	7
	Fractions (including decimals and percentages)	Decimals and percentages	12
TERM 3	Fractions (including decimals and percentages)	Decimals	15
	Geometry – property of shape	Properties of shapes	7
	Geometry – property of shape	Properties of shapes	5
	Geometry – position and direction	Position and direction	4
	Measurement	Converting units	10

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	Measurement	Volume and Capacity	14

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Term	Strand	Unit	Lesson number	Key concepts	NC objective link	Planning days	Ready to progress
AUTUMN 1	Place Value	1	1,2	• Numbers to 10,000 • Rounding to the nearest 10, 100 and 1,000 • 10,000s, 1,000s, 100s, 10s and 1s	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	2 days PM 1 day AFL	Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning. Reason about the location of any fourdigit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each. Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.
	Place Value	1	3,4,5,6	• The number line to 100,000 • Comparing and ordering numbers to 100,000	Solve number problems and practical problems that involve all of the above	4 days PM	
	Place Value Place Value	1 2	7,8 1,2	• Roman numerals to 10,000 • 100,000s 10,000s, 1,000s, 100s, 10s and 1s	Round any number to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 Read roman numerals to 1,000 (m) and recognise years written in roman numerals Solve number problems and practical problems that involve all of the above	4 days PM	
	Place Value	2	3,4,5,6	• Number line to 1,000,000 • Comparing and ordering numbers to 1,000,000 • Rounding numbers to a 1,000,000 • Negative numbers	Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	4 days PM	

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					Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero		
	Place Value Addition and Subtraction	2 3	7,8 1	• Number sequences • Adding whole numbers with more than 4 digits	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 Solve number problems and practical problems that involve all of the above Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	3 days PM 1 day AFL	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100) Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.
	Addition and Subtraction	3	2,3,4,5	• Adding whole numbers with more than 4 digits • Subtracting whole numbers with more than 4 digits • Using rounding to estimate and check answers	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	4 days PM	
HALF TERM							
AUTUMN 2	Addition and Subtraction	3	6,7,8,9,10	• Mental addition and subtraction • Mental addition and subtraction • Using inverse operations	Add and subtract numbers mentally with increasingly large numbers Estimate and use inverse operations to check answers to a calculation	5 days PM	Add and subtract up to three-digit numbers using columnar methods Calculate complements to 100.

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				• Problem solving – addition and subtraction	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why		
	Statistics	4	1,2,3,4	• Interpreting tables • Two-way tables • Interpreting line graphs	Complete, read and interpret information in tables, including timetables Solve comparison, sum and difference problems using information presented in a line graph	4 days PM	See PM previous units
	Statistics Multiplication and Division	4	5 1,2	• Drawing line graphs • Multiples • Factors	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	3 days PM 1 day AFL	Recall multiplication and division facts up to , and recognise products in multiplication tables as multiples of the corresponding number. Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context
	Multiplication and Division	4	3,4,5,6	• Prime numbers • Using factors • Squares • Cubes	Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	4 days PM	Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.
	Multiplication and Division	4	7,8,9,10	• Inverse operations • Multiplying whole numbers by 10, 100 and 1,000	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	4 days PM 1 day AFL	Understand and apply the distributive property of multiplication

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				• Dividing whole numbers by 10, 100 and 1,000			
	Measurement	5	1,2,3,4	• Measuring perimeter • Calculating perimeter	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	4 days PM	
	Measurement	5	5,6,7	• Comparing area • Estimating area	Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes	3 days PM	Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.
CHRISTMAS HOLIDAYS							

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Week beg	Strand	Unit	Lesson number	Key concepts	NC objective link	Planning days	Ready to progress
SPRING 1	Number – multiplication and division	7	1,2,3,4	• Multiplying numbers up to 4 digits by a 1-digit number • Multiplying 2-digit numbers (3 lessons)	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Multiply and divide numbers mentally drawing upon known facts	4 days PM 1 day AFL	Recall multiplication and division facts up to , and recognise products in multiplication tables as multiples of the corresponding number. Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. Manipulate multiplication and division equations, and understand and apply
	Number – multiplication and division	7	5,6,7,8	• Multiplying a 3-digit number by a 2-digit number • Multiplying a 4-digit number by a 2-digit number • Dividing up to a 4-digit number by a 1-digit number (2 lessons)	Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	4 days PM 1 day mental maths / times tables	
	Number – multiplication and division	7	9,10,11	Division with remainders (2 lessons) Problem solving – division with remainders	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	3 days PM 1 day AFL 1 day mental maths	

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							the commutative property of multiplication.
	Number – fractions (including decimals and percentages)	8	1,2,3,4	• Equivalent fractions • Converting improper fractions to mixed numbers • Converting mixed numbers to improper fractions • Number sequences	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2 5 + 4 5 = 6 5 = 1 1 5] Compare and order fractions whose denominators are all multiples of the same number	4 days PM 1 day menta maths	Understand and apply the distributive property of multiplication
	Number – fractions (including decimals and percentages)	8	5,6,7,8	• Comparing and ordering fractions (2 lessons) • Fractions as division (2 lessons)	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2 5 + 4 5 = 6 5 = 1 1 5] Add and subtract fractions with the same denominator and denominators that are multiples of the same number	4 days PM 1 day AFL	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten Recognise and show, using diagrams, families of common equivalent fractions Solve problems involving increasingly harder fractions to calculate quantities, and fractions
	Number – fractions (including decimals and percentages)	9	1,2,3,4, 5	• Adding and subtracting fractions with the same denominator • Adding and subtracting fractions (2 lessons) • Adding fractions (2 lessons)	Add and subtract fractions with the same denominator and denominators that are multiples of the same number Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as	5 days PM	

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					a mixed number [for example, 2 5 + 4 5 = 6 5 = 1 1 5]		to divide quantities, including non-unit fractions where the answer is a whole number
SPRING 2	Number – fractions (including decimals and percentages)	9	6,7,8,9	• Adding fractions • Subtracting fractions (3 lessons)	Add and subtract fractions with the same denominator and denominators that are multiples of the same number Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2 5 + 4 5 = 6 5 = 1 1 5]	4 days PM	Add and subtract fractions with the same denominator
	Number – fractions (including decimals and percentages)	9 10	10,11,12 1	• Subtracting fractions • Problem solving – mixed word problems (2 lessons) • Multiplying fractions	Add and subtract fractions with the same denominator and denominators that are multiples of the same number Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	4 days PM 1 day AFL	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

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	Number – fractions (including decimals and percentages)	10	2,3,4,5	• Multiplying fractions (3 lessons) • Calculating fractions of amounts	Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2 5 + 4 5 = 6 5 = 1 1 5] Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	4 days PM 1 day mental maths	
	Number – fractions (including decimals and percentages) Decimals and percentages	10 10	6 , 7 1,2, 3	• Using fractions as operators • Problem solving – mixed word problems • Writing decimals (2 lessons) • Decimals as fractions	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Read, write, order and compare numbers with up to three decimal places	5 days PM	Recognise and write decimal equivalents of any number of tenths or hundredths Solve simple measure and money problems involving fractions and decimals to two decimal places
	Decimals and percentages	10	4,5,6,7, 8	• Decimals as fractions • Understanding thousandths • Writing thousandths as decimals • Ordering and comparing decimals (2 lessons)	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Read, write, order and compare numbers with up to three decimal places	5 days PM	Recognise and write decimal equivalents of any number of tenths or hundredths Solve simple measure and money problems involving fractions and decimals to two decimal places
	Decimals and percentages	10	9,10,11,12	• Rounding decimals • Understanding percentages	Round decimals with two decimal places to the nearest whole number and to one decimal place	4 days PM	

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				• Percentages as fractions and decimals • Equivalent fractions, decimals and percentages	Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal		
EASTER HOLIDAYS							

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Week beg	Strand	Unit	Lesson number	Key concepts	NC objective link	Planning days	Ready to progress
SUMMER 1	Decimals	12	1,2,3,4	• Adding and subtracting decimals (8 lessons)	Solve problems involving number up to three decimal places	4 PM days 1 day AFL or mental maths	In Year 4 … pupils recognise and write decimal equivalents of any number of tenths or hundredths ;recognise and write decimal equivalents to 4 1 , 2 1 , 4 3; 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 ; round decimals with one decimal place to the nearest whole number ; compare numbers with the same number of decimal places up to two decimal places ; solve simple measure and money problems involving fractions and decimals to two decimal places.
	Decimals	12	5,6,7,8	• Adding and subtracting decimals (8 lessons)	Solve problems involving number up to three decimal places	4 PM days 1 day AFL or mental maths	
	Decimals	12	9.10.11	• Decimal sequences • Problem solving with decimals (2 lessons)	Solve problems involving number up to three decimal places	MAY DAY – 4 day week 3 days PM	In Year 4…Pupils learn decimal notation and the language associated with it, including in the context of measurements. They make comparisons and order decimal amounts and quantities that are expressed to the same number of decimal places. They should be
	Decimals	12	12,13,14,15	• Multiplying decimals by 10 • Multiplying decimals by 10, 100 and 1,000 • Dividing decimals by 10	Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Solve problems involving number up to three decimal places	4 PM days 1 day AFL or mental maths	

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				• Dividing decimals by 10, 100 and 1,000			able to represent numbers with one or two decimal places in several ways, such as on number lines.
	Geometry	13	1,2,3,4	• Measuring angles in degrees • Measuring with a protractor (2 lessons) • Drawing lines and angles accurately	Identify: –angles at a point and one whole turn (total 360°) –angles at a point on a straight line and 1 2 a turn (total 180°) –other multiples of 90° Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees (°)	4 PM days 1 day AFL or mental maths	In Year 4…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.
HALF TERM							
SUMMER 2	Geometry Geometry – shape	13 14	5,6,7 1	Calculating angles on a straight line Calculating angles around a point Calculating lengths and angles in shapes Recognising and drawing parallel lines	Use the properties of rectangles to deduce related facts and find missing lengths and angles	4 days PM	
	Geometry – shapes	14	2,3,4,5	• Recognising and drawing perpendicular lines • Reasoning about parallel and perpendicular • Regular and irregular polygons	Use the properties of rectangles to deduce related facts and find missing lengths and angles Identify: – angles at a point and one whole turn (total 360°) – angles at a point on a straight line and 1 2 a turn (total 180 Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	4 days PM	In Year 4 pupils… compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify acute and obtuse angles and

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				• Reasoning about 3D shapes	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed		compare and order angles up to two right angles by size 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.
	Geometry – position and direction	15	1,2,3,4	• Reflection • Reflection with c-ordinates • Translation • Translation with coordinates	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	4 days PM	
	Measurement	16	1,2,3,4,5	• Metric units x 4 lessons • Imperial units of length	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	5 PM lessons – consider condensing the 4 on metric units	In Year 4 pupils… Convert between different units of measure [for example, kilometre to metre; hour to minute] estimate, compare and calculate different measures, including money in pounds and pence read, write and convert time between analogue and digital 12- and 24-hour clocks solve problems involving converting from hours to minutes;
	Measurement	16	6,7,8,9,10	• Imperial units of mass • Imperial units of capacity • Converting units of time • Timetables • Problem solving – measure	Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	5 PM sessions , consider practical problem solve for conversion	
	Measurement	17	1,2,3,4	• What is volume? • Comparing volume • Estimating volume • Estimating capacity	Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]	4 PM lessons	

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							minutes to seconds; years to months; weeks to days.
Time for assessment and transition							