



Mathematics Long Term Plan

Nightingale 2026-2027

Autumn

	National Curriculum Objectives	Small Steps
Number: Place Value 4 weeks	- Count in multiples of 6, 7, 9, 25 and 1000. - Find 1000 more or less than a given number. - Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones) - Order and compare numbers beyond 1000 - Identify, represent and estimate numbers using different representations. - Round any number to the nearest 10, 100 or 1000	- Represent numbers to 1,000 - Partition numbers to 1,000 - Number line to 1,000 - Thousands - Represent numbers to 10,000 - Partition numbers to 10,000 - Flexible partitioning of numbers to 10,000 - Find 1, 10, 100, 1,000 more or less - Number line to 10,000 - Estimate on a number line to 10,000 - Compare numbers to 10,000

	National Curriculum Objectives	Small Steps
Number: Place Value 3 weeks	- Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. - Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. - Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 - Solve number problems and practical problems that involve all of the above.	- Roman numerals to 1,000 - Number to 10,000 - Numbers to 100,000 - Numbers to 1,000,000 - Read and write numbers to 1,000,000 - Powers of 10 10/100/1,000/10,000/100,000 more or less - Partition numbers to 1,000,000 - Number line to 1,000,000 - Compare and order numbers to 100,000 - Compare and order numbers to 1,000,000

	- Solve number and practical problems that involve all of the above and with increasingly large positive numbers. - 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.	- Order numbers to 10,000 - Roman numerals - Round to the nearest 10 - Round to the nearest 100 - Round to the nearest 1,000 - Round to the nearest 10, 100 or 1,000
Number: Addition and Subtraction 5 weeks	- Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. - 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.	- Add and subtract 1s, 10s, 100s and 1,000s - Add up to two 4-digit numbers – no exchange - Add two 4-digit numbers – one exchange - Add two 4-digit numbers – more than one exchange - Subtract two 4-digit numbers – no exchange - Subtract two 4-digit numbers – one exchange - Subtract two 4-digit numbers – more than one exchange - Efficient subtraction - Estimate answers - Checking strategies
Measurement: Area 1 week	Find the area of rectilinear shapes by counting squares.	- What is area? - Count squares - Make shapes

	Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	- Round to the nearest 10, 100 and 1,000 - Round within 100,000 - Round within 1,000,000
Number: Addition and Subtraction 2 weeks	- Add and subtract numbers mentally with increasingly large numbers. - 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. - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	- Mental strategies - Add whole numbers with more than four digits - Subtract whole numbers with more than four digits - Round to check answers - Inverse operations (addition and subtraction) - Multi-step addition and subtraction problems - Compare calculations - Find missing numbers
Number: Multiplication and Division A	Multiply and divide numbers mentally drawing upon known facts.	- Multiples - Common multiples - Factors

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3 weeks	• Multiply and divide whole numbers by 10, 100 and 1000. • Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3) • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Establish whether a number up to 100 is prime and recall prime numbers up to 19	• Common factors • Prime numbers • Square numbers • Cube numbers • Multiply by 10, 100 and 1,000 • Divide by 10, 100 and 1,000 • Multiples of 10, 100 and 1,000
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Number: Multiplication and Division A 3 weeks	- Recall and use multiplication and division facts for multiplication tables up to 12×12. - Count in multiples of 6, 7, 9, 25 and 1000 - 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. - 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.	- Multiples of 3 - Multiply and divide by 6 6 times-table and division facts - Multiply and divide by 9 9 times-table and division facts - The 3, 6 and 9 times-tables - Multiply and divide by 7 7 times-table and division facts 11 times-table and division facts 12 times-table and division facts - Multiply by 1 and 0 - Divide a number by 1 and itself - Multiply three numbers
Consolidation 1 week		

Number: Fractions A 4 weeks	- Compare and order fractions whose denominators are multiples of the same number. - 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 $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] - Add and subtract fractions with the same denominator and denominators that are multiples of the same number.	- Find fractions equivalent to a unit fraction - Find fractions equivalent to a non-unit fraction - Recognise equivalent fractions - Convert improper fractions to mixed numbers - Convert mixed numbers to improper fractions - Compare fractions less than 1 - Order fractions less than 1 - Compare and order fractions greater than 1 - Add and subtract fractions with the same denominator - Add fractions within 1 - Add fractions with total greater than 1 - Add to a mixed number - Add two mixed numbers - Subtract fractions - Subtract from a mixed number - Subtract from a mixed number – breaking the whole - Subtract two mixed numbers
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Spring

	National Curriculum Objectives	Small Steps
Number: Multiplication and Division B 3 weeks	- Recall and use multiplication and division facts for multiplication tables up to 12×12. - Count in multiples of 6, 7, 9, 25 and 1000 - 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. - 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.	- Factor pairs - Use factor pairs - Multiply by 10 - Multiply by 100 - Divide by 10 - Divide by 100 - Related facts - multiplication and division - Informal written methods for multiplication - Multiply a 2-digit number by a 1-digit number - Multiply a 3-digit number by a 1-digit number - Divide a 2-digit number by a 1-digit number (1) - Divide a 2-digit number by a 1-digit number (2) - Divide a 3-digit number by a 1-digit number - Correspondence problems - Efficient multiplication
Measurement: Length and Perimeter 2 weeks	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres	- Measure in kilometres and metres - Equivalent lengths (kilometres and metres) - Perimeter on a grid

	National Curriculum Objectives	Small Steps
Number: Multiplication and Division B 3 weeks	- Multiply and divide numbers mentally drawing upon known facts. - Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for 2-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. - Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.	- Multiply up to a 4-digit number by a 1-digit number - Multiply a 2-digit number by a 2-digit number (area model) - Multiply a 2-digit number by a 2-digit number - Multiply a 3-digit number by a 2-digit number - Multiply a 4-digit number by a 2-digit number - Solve problems with multiplication - Short division - Divide a 4-digit number by a 1-digit number - Divide with remainders - Efficient division - Solve problems with multiplication and division
Number: Fractions B 2 weeks	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	- Multiply a unit fraction by an integer - Multiply a non-unit fraction by an integer

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	Convert between different units of measure [for example, kilometre to metre]	- Perimeter of a rectangle - Perimeter of rectilinear shapes - Find missing lengths in rectilinear shapes - Calculate the perimeter of rectilinear shapes - Perimeter of regular polygons - Perimeter of polygons
Number: Fractions 4 weeks	- Recognise and show, using diagrams, families of common equivalent fractions. - Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. - 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. - Add and subtract fractions with the same denominator.	- Understand the whole - Count beyond 1 - Partition a mixed number - Number lines with mixed numbers - Compare and order mixed numbers - Understand improper fractions - Convert mixed numbers to improper fractions - Convert improper fractions to mixed numbers - Equivalent fractions on a number line - Equivalent fraction families - Add two or more fractions - Add fractions and mixed numbers - Subtract two fractions - Subtract from whole amounts

	- Read and write decimal numbers as fractions [for example $0.71 = \frac{71}{100}$] - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	- Multiply a mixed number by an integer - Calculate a fraction of a quantity - Fraction of an amount - Find the whole - Use fractions as operators
Number: Decimals and Percentages 3 weeks	- Read, write, order and compare numbers with up to three decimal places. - Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. - Round decimals with two decimal places to the nearest whole number and to one decimal place. - Solve problems involving number up to three decimal places. - 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.	- Decimals up to 2 decimal places - Equivalent fractions and decimals (tenths) - Equivalent fractions and decimals (hundredths) - Equivalent fractions and decimals - Thousandths as fractions - Thousandths as decimals - Thousandths on a place value chart - Order and compare decimals (same number of decimal places) - Order and compare any decimals with up to 3 decimal places - Round to the nearest whole number - Round to 1 decimal place

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		Subtract from mixed numbers
Number: Decimals A 3 weeks	- Recognise and write decimal equivalents of any number of tenths or hundredths. - Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths - Solve simple measure and money problems involving fractions and decimals to two decimal places. - Convert between different units of measure [for example, kilometre to metre]	- Tenths as fractions - Tenths as decimals - Tenths on a place value chart - Tenths on a number line - Divide a 1-digit number by 10 - Divide a 2-digit number by 10 - Hundredths as fractions - Hundredths as decimals - Hundredths on a place value chart - Divide a 1- or 2-digit number by 100

	Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	- Understand percentages - Percentages as fractions - Percentages as decimals - Equivalent fractions, decimals and percentages
Measurement: Perimeter and Area 2 weeks	- Measure and calculate the perimeter of composite rectilinear shapes in cm and m. - Calculate and compare the area of rectangles (including squares), and including using standard units, cm^2, m^2 estimate the area of irregular shapes.	- Perimeter of rectangles - Perimeter of rectilinear shapes - Perimeter of polygons - Area of rectangles - Area of compound shapes - Estimate area
Statistics 2 weeks	- Solve comparison, sum and difference problems using information presented in a line graph. - Complete, read and interpret information in tables including timetables.	- Draw line graphs - Read and interpret line graphs - Read and interpret tables - Two-way tables - Read and interpret timetables

Summer

	National Curriculum Objectives	Small Steps
Number: Decimals B 2 weeks	- Compare numbers with the same number of decimal places up to two decimal places. - Round decimals with one decimal place to the nearest whole number. - Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$. - Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths	- Make a whole with tenths - Make a whole with hundredths - Partition decimals - Flexibly partition decimals - Compare decimals - Order decimals - Round to the nearest whole number - Halves and quarters as decimals
Measurement: Money 2 weeks	Estimate, compare and calculate different measures, including	- Write money using decimals - Convert between pounds and pence

	National Curriculum Objectives	Small Steps
Geometry: Shape 3 weeks	- Identify 3D shapes, including cubes and other cuboids, from 2D representations. - Use the properties of rectangles to deduce related facts and find missing lengths and angles. - Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. - Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. - Draw given angles, and measure them in degrees ($^{\circ}$) - Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) other multiples of 90°	- Understand and use degrees - Classify angles - Estimate angles - Measure angles up to 180° - Draw lines and angles accurately - Calculate angles around a point - Calculate angles on a straight line - Lengths and angles in shapes - Regular and irregular polygons 3-D shapes
Geometry: Position and Direction	Identify, describe and represent the position of a shape following a reflection or translation,	- Read and plot coordinates - Problem solving with coordinates

	money in pounds and pence. Solve simple measure and money problems involving fractions and decimals to two decimal places.	- Compare amounts of money - Estimate with money - Calculate with money - Solve problems with money
Measurement: Time 2 weeks	- Convert between different units of measure [for example, kilometre to metre; hour to minute] - Read, write and convert time between analogue and digital 12- and 24-hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	- Years, months, weeks and days - Hours, minutes and seconds - Convert between analogue and digital times - Convert to the 24hour clock - Convert from the 24hour clock
Consolidation 1 week		

2 weeks	using the appropriate language, and know that the shape has not changed.	- Translation - Translation with coordinates - Lines of symmetry - Reflection in horizontal and vertical lines
Number: Decimals 3 weeks	- Solve problems involving number up to three decimal places. - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. - Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	- Use known facts to add and subtract decimals within 1 - Complements to 1 - Add and subtract decimals across 1 - Add decimals with the same number of decimal places - Subtract decimals with the same number of decimal places - Add decimals with different numbers of decimal places - Subtract decimals with different numbers of decimal places - Efficient strategies for adding and subtracting decimals - Decimal sequences - Multiply by 10, 100 and 1,000 - Divide by 10, 100 and 1,000 - Multiply and divide decimals – missing values

Geometry: Shape 2 weeks	- Identify acute and obtuse angles and compare and order angles up to two right angles by size. - Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. - 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.	- Understand angles as turns - Identify angles - Compare and order angles - Triangles - Quadrilaterals - Polygons - Lines of symmetry - Complete a symmetric figure
Statistics 1 weeks	- Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. - Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.	- Interpret charts - Comparison, sum and difference - Interpret line graphs - Draw line graphs

Number: Negative Numbers 1 week	Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. Solve number problems and practical problems	- Understand negative numbers - Count through zero in 1s - Count through zero in multiples - Compare and order negative numbers - Find the difference
Measurement: Converting Units 2 weeks	- Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml] - Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. - Solve problems involving converting between units of time.	- Kilograms and kilometres - Millimetres and millilitres - Convert units of length - Convert between metric and imperial units - Convert units of time - Calculate with timetables

Geometry: Position and Direction 2 weeks	• Describe positions on a 2-D grid as coordinates in the first quadrant. • Plot specified points and draw sides to complete a given polygon. Describe movements between positions as translations of a given unit to the left/ right and up/ down.	• Describe position using coordinates • Plot coordinates • Draw 2-D shapes on a grid • Translate on a grid • Describe translation on a grid
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Measurement: Volume 1 week	• Estimate volume [for example using 1cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • Use all four operations to solve problems involving measure.	• Cubic centimetres • Compare volume • Estimate volume • Estimate capacity
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