

Class 4 –Curriculum Overview, 4, 5

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn 13 weeks	Place Value				Addition and Subtraction (including money)						Graphs and Statistics		
Spring 12 weeks	Multiplication and division					Fractions & Decimals						Coordinates & Angles	
Summer 13 weeks	Length & Perimeter		Time & Converting units			Volume, capacity, mass			Shape		Consolidation and application		

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	Week 1 – 4 Place Value	Week 5-10 Addition & Subtraction (including money)	Week 11-12 Statistics
Autumn Term 13 weeks	<p>Find 1000 more or less than a given number. Read, write, order and compare numbers to at least 1000000 and determine the value of each digit.</p> <p>Recognise the place value of each digit in a 4 digit number. Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero.</p> <p>Order and compare numbers beyond 1000. Count in multiples of 6, 7, 9, 25 and 1000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers.</p> <p>Solve number problems and practical problems that involve all of the above.</p> <p>Count backwards through zero to include negative numbers. Round any number to the nearest 10, 100 or 1000 Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000</p> <p>Round decimals with one decimal place to the nearest whole number. 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. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p> <p>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. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Read, write, order and compare numbers with up to three decimal places.</p>	<p>Add and subtract numbers mentally with increasingly large numbers. Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. 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.</p> <p>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. Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why.</p> <p>Estimate, compare and calculate different measures, including money in pounds and pence Solve simple measure and money problems involving fractions and decimals to two decimal places. Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.</p>	<p>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Complete, read and interpret information in tables including timetables. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Solve comparison, sum and difference problems using information presented in a line graph.</p>

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<i>Week 1 – 5</i> <i>Multiplication & Division</i>	<i>Week 6-10</i> <i>Fractions, Decimals, Percentages</i>	<i>Week 11-12</i> <i>Coordinates & Angles</i>
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Spring Term 12 weeks

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Recall and use multiplication and division facts for multiplication tables up to 12×12 .

Recognise and use factor pairs and commutativity in mental calculations.
Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.

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.

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 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.

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.

Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.

Multiply two digit and three digit numbers by a one digit number using formal written layout.

Find the area of

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.

rectilinear shapes by counting squares (link to multiplication)

Multiply and divide numbers mentally drawing upon known facts.
Multiply and divide whole numbers by 10, 100 and 1000.

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

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.

Count up and down in hundredths.

Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.

Find the effect of multiplying and 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.

Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.

Recognise and show, using diagrams, families of common equivalent fractions.

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 $2\frac{1}{5} + 4\frac{1}{5} = 6\frac{2}{5} = 1\frac{1}{5}$]

Add and subtract fractions with the same denominator.

Add and subtract fractions with the same denominator and denominators that are multiples of the same number.

Recognise and write decimal equivalents of any number of tenths or hundredths.

Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.

Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$

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.

Compare and order fractions whose denominators are multiples of the same number.

Solve simple measure and money problems involving fractions and decimals to two decimal places

Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Read and write decimal numbers as fractions [for example $0.71 = \frac{71}{100}$]

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.

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

Identify acute and obtuse angles and compare and order angles up to two right angles by size.

Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.

Draw given angles, and measure them in degrees

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°

Describe positions on a 2D grid as coordinates in the first quadrant.

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

Describe movements between positions as translations of a given unit to the left/ right and up/ down.

Plot specified points and draw sides to complete a given polygon.

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.

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	Week 1 – 2 Length & Perimeter	Week 3-5 Time & converting units	Week 6-8 Volume, Capacity & Mass	Week 9-10 Shape	Week 11-12 Consolidation & Application
Summer Term 12 weeks	<p>Measure and calculate the perimeter of composite rectilinear shapes in cm and m.</p> <p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</p> <p>Calculate and compare the area of rectangles (including squares), and including using standard units, cm²,m² estimate the area of irregular shapes.</p> <p>Convert between different units of measure e.g km-m</p>	<p>Read, write & convert time between analogue and digital 12 and 14 hour clocks.</p> <p>Solve problems involving converting between units of time</p> <p>Convert between different units of measure hour to minute.</p> <p>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.</p> <p>Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days</p> <p>Convert between different units of metric measure (, km and m; cm and m; cm and mm; g and kg; l and ml)</p>	<p>Estimate volume [for example using 1cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]</p> <p>Investigate volume and capacity in a practical context.</p> <p>Use all four operations to solve problems involving measure</p>	<p>Complete a simple symmetric figure with respect to a specific line of symmetry.</p> <p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.</p> <p>Identify 3D shapes, including cubes and other cuboids, from 2D representations.</p> <p>Use the properties of rectangles to deduce related facts and find missing lengths and angles.</p> <p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles</p>	<p><i>Follow own fascinations in mathematics using investigative learning – focus on four operations and any gaps identified from assessments..</i></p>