Year 4 Maths Curriculum Overview

Topic	National Curriculum Objectives	Term Covered	Vocabulary	Key Problem Solving Strategies	Useful Resources
Place Value: Counting	⇒ Count in multiples of 6, 7, 9, 25 and 1000 ⇒ Count backwards through zero to include negative numbers	Autumn 1 Autumn 4	Multiple, ascending, descending, positive number, negative number, equal groups, times tables, double, multiplication and division fact family, altogether	Counting forwards and backwards; using knowledge of the 3 times table for the 6 times table, (empty) number lines, known number facts, number tracks, bar models, concrete objects, hundred squares	(Empty) number lines, number tracks, hundred squares, bar models, part-whole models, numicon, bar models, dice, egg cartons
Place Value: Represent	⇒ Identify, represent and estimate numbers using different representations ⇒ 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	Autumn 1	Roman numerals, place holder, place value, place value column, round (up/ down), ones, tens, hundreds, thousands, digit, value, partition, part, whole	Drawing pictures; using place value grids, concrete manipulatives, place value counters, base 10 equipment, part-whole models, hundred squares	(Empty) number lines, place value grids, place value counters, place value arrows, base 10 equipment, part-whole models, hundred squares
Place Value: Use PV and Compare	⇒ 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	Autumn 1	Roman numerals, place holder, multiple, place value, place value column, ones, tens, hundreds, thousands, digit, value, partition, part, whole, exchange, greater, more, less, fewer, greatest, most, least, fewest	Using place value grids, concrete manipulatives, place value counters, base 10 equipment, part-whole models, (empty) number lines, number tracks, hundred squares	(Empty) number lines, place value grids, place value counters, place value arrows, base 10 equipment, part-whole models, number tracks, hundred squares
Place Value: Problems & Rounding	⇒ Round any number to the nearest 10, 100 or 1000 ⇒ Solve number and practical problems that involve all of the above and with	Autumn 1	Roman numerals, place holder, multiple, place value, place value column, round (up/ down), ones, tens, hundreds, thousands,	Using place value grids, concrete manipulatives, place value counters, base 10 equipment, part-whole models, (empty)	(Empty) number lines, place value grids, place value counters, place value arrows, base 10 equipment, part-whole

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	increasingly large positive numbers		digit, value, partition, part, whole, exchange, positive number, negative number	number lines, number tracks, hundred squares	models, number tracks, hundred squares
Addition & Subtraction: Recall, Represent, Use	⇒ Estimate and use inverse operations to check answers to a calculation	Autumn 2	Add, sum, take away, subtract, plus, minus, calculation, total, difference, estimate, inverse	Using bar models, column addition, column subtraction, mental methods, (empty) number lines	Bar models, (empty) number lines
Addition & Subtraction: Calculations	⇒ Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	Autumn 2	Ones, tens, hundreds, thousands, add, sum, plus, take away, subtract, minus, digit, value, place value, place value column, exchange, calculation, difference, total, part, whole	Using place value grids and counters, base 10 equipment, bar models, column addition, column subtraction, mental methods, (empty) number lines, part-whole models	Base 10 equipment, place value grids and counters, bar models, (empty) number lines, part-whole models
Addition & Subtraction: Solve Problems	⇒ Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	Autumn 2	Ones, tens, hundreds, thousands, add, plus, sum, take away, subtract, minus, digit, value, place value, place value column, exchange, calculation, operation, total, whole, part, difference	Using place value grids and counters, base 10 equipment, bar models, column addition, column subtraction, mental methods, (empty) number lines, part-whole models	Base 10 equipment, place value grids and counters, bar models, (empty) number lines, part-whole models
Multiplication & Division: Recall Represent, Use	⇒ Recall multiplication and division facts for multiplication tables up to 12 x 12 ⇒ 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	Autumn 4 Spring 1	'Lots of', groups, value, multiple, calculations, multiply, divide, digits, inverse, equal groups, multiplication and division fact family, times tables, number sentence, double, rows, columns, commutative, associative, product,	Using knowledge of 1, 2 and 10 times table to help with 11 and 12 times tables, mental multiplication, multiplication tables	Multiplication tables

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	⇒ Recognise and use factors pairs and commutativity in mental calculations		factor, factor pair, divisor		
Multiplication & Division: Calculations	⇒ Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	Spring 1	Partition, multiply, divide, part, whole, factor, divisor, product, exchange, associative, commutative, factor pair, place value, place value columns, ones, tens, hundreds, thousands	Partitioning; base 10 equipment, part-whole models, place value grids and counters, short multiplication	Base 10 equipment, bar models, arrays, (empty) number lines, part-whole models, place value grids and counters
Multiplication & Division: Solve Problems	⇒ 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	Spring 1	Partition, multiply, distribute, associative, commutative, factor, product, factor pair, whole number, arrays, rows, columns, divisor, exchange, part, whole, scale	Partitioning; arrays, base 10 equipment, (empty) number lines, bar models, mental multiplication, part-whole models, place value grids and counters, short multiplication	Base 10 equipment, bar models, arrays, (empty) number lines, part-whole models, place value grids and counters
Fractions: Recognise and Write	⇒ Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	Spring 3	Fraction, numerator, denominator, unit fractions, non-unit fractions, part, whole, equal parts, ascending, descending, tenths, hundredths	Shading; folding strips of paper; using bar models, part-whole models, number lines, known number facts, counting forwards, counting backwards	Objects or similar, number lines, Cuisenaire, strips of paper, part-whole models, bar models
Fractions: Compare	⇒ Recognise and show, using diagrams, families or common equivalent fractions	Spring 3	Fraction, numerator, denominator, unit fractions, non-unit fractions, equivalent, multiply, part, whole, equal parts	Shading; folding strips of paper; using shapes, part-whole models, bar models, manipulatives, known number facts	2-D shapes, objects or similar, number lines, Cuisenaire, strips of paper, part-whole models, bar models
Fractions: Calculations	⇒ Add and subtract fractions with a same denominator	Spring 3	Fraction, numerator, denominator, unit fractions, non-unit fractions, part, whole,	Using number lines, manipulatives, part-whole models, bar models, known number	Objects or similar, number lines, Cuisenaire, part-whole models, bar models

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			equal parts, take away, add, subtract, plus, minus, difference, total	facts, counting forwards, counting backwards	
Fractions: Solve Problems	⇒ 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	Spring 3	Fraction, numerator, denominator, unit fractions, non-unit fractions, divide, part, whole, equal parts, add, subtract, take away, difference, total, plus, minus	Shading; folding strips of paper; using shapes, number lines, manipulatives, part-whole models, known number facts, bar models, counting forwards, counting backwards	2-D shapes, objects or similar, number lines, Cuisenaire, strips of paper, part-whole models, bar models
Decimals: Recognise and Write	⇒ Recognise and write decimal equivalents of any number of tenths or hundredths ⇒ Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$	Spring 4 Summer 1	Partition, ones, tenths, hundredths, whole, one whole, part, decimal, fraction, equal parts, decimal point, place holder, measurement, divide, digit, halves, quarters, equivalent, value, whole number, place value, place value column	Using part-whole models, hundred squares, base 10 equipment, tens frames, number lines, place value grids and counters, Gattegno charts, bead strings, number bonds to ten and one hundred, knowledge of equivalent fractions	Hundred squares, base 10 equipment, part-whole models, tens frames, number lines, place value grids and counters, rulers, tape measures, objects to measure, Gattegno charts, bead strings
Decimals: Compare	⇒ 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	Summer 1	Decimal, whole, tenths, hundredths, digit, part, whole, partition, value, place holder, round, ascending, descending, whole number, place value, place value column	Using number bonds to ten and one hundred, part-whole models, bead strings, hundred squares, place value grids and counters	Bead strings, part-whole models, hundred squares, place value grids and counters
Decimals: Calculation & Problems	⇒ 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	Spring 4	Partition, ones, tenths, hundredths, whole, one whole, part, decimal, fraction, equal parts, decimal point, place holder, divide, digit	Using part-whole models, hundred squares, base 10 equipment, tens frames, number lines, place value grids and	Hundred squares, base 10 equipment, part-whole models, tens frames, number lines, place value grids and counters, bead strings, Gattegno charts

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				counters, Gattegno charts, bead strings	
Fractions, Decimals and Percentages	⇒ Solve simple measure and money problems involving fractions and decimals to two decimal places	Spring 3 Spring 4 Summer 1	Partition, ones, tenths, hundredths, whole, one whole, part, decimal, fraction, equal parts, decimal point, place holder, digit, value, whole number, place value, place value column, measurement, centimetres, scale, millimetres, pound, pence	Using part-whole models, knowledge of equivalent fractions, base 10 equipment, hundred squares, tens frames, number lines, bead strings, number bonds to ten and one hundred, place value grids and counters, Gattegno charts	Hundred squares, base 10 equipment, part-whole models, tens frames, number lines, place value grids and counters, rulers, tape measures, objects to measure, Gattegno charts, bead strings, real money, rulers, tape measures, objects to measure
Measurement: Using Measures	⇒ Convert between different units of measure [for example, kilometre to metre; hour to minute] ⇒ Estimate, compare and calculate different measures	Autumn 3 Spring 2 Summer 3	Kilometres, metres, length, distance, width, measure, area, surface, larger, smaller, longer, shorter, minutes, 'past', 'to', hours, seconds, calculation	Using rulers, clocks, number lines	Centimetre squared paper, rulers, number lines, 2-D rectilinear shapes, clocks (analogue and digital)
Measurement: Money	⇒ Estimate, compare and calculate different measures, including money in pounds and pence	Summer 2	Pounds, pence, decimal point, unit, partition, place value, place value columns, total, digit, value, greater, less, ascending, descending, estimate, operations, convert, round, amount	Using part-whole models, place value grids and counters, (empty) number lines, bar models	Part-whole models, place value grids and counters, real coins and notes, (empty) number lines, bar models
Measurement: Time	⇒ 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	Summer 3	Minutes, hours, seconds, year, month, week, day, multiply, divide, clock face, add, subtract, calculation, analogue, digital, 12 hour, a.m., p.m., 'past', 'to', 24 hour, morning, afternoon, midday	Using clocks, number lines	Clocks (analogue and digital), number lines

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Measurement: Perimeter, Area, Volume	⇒ Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres ⇒ Find the area of rectilinear shapes by counting squares	Autumn 3 Spring 2	Multiply, centimetres, metres, add, plus, total, length, perimeter, area, rectilinear, shape, side, width, square, surface, rectangle, 2-D shape	Making rectilinear shapes with squares; using rulers, squared paper	Centimetre squared paper, rulers, squares for making rectilinear shapes 2-D rectilinear shapes
Geometry: 2-D Shapes	⇒ 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	Summer 5	2-D shapes, polygon, triangle, isosceles, scalene, equilateral, properties, orientation, quadrilateral, square, rectangle, rhombus, parallelogram, trapezium, line of symmetry, symmetrical	Folding paper shapes to test for symmetry; using rulers, using mirrors and tracing paper to identify symmetry, using squared paper to draw shapes	Rulers, different triangles, different quadrilaterals, mirrors, tracing paper, squared paper
Geometry: Angles & Lines	⇒ Identify acute and obtuse angles and 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	Summer 5	Obtuse, acute, right angle, degrees, 2-D shapes, ascending, descending, polygon, orientation, quadrilateral, square, rectangle, rhombus, parallelogram, trapezium, line of symmetry, symmetrical	Creating own angles using dotted paper; folding paper shapes to test for symmetry; using rulers, right angle testers, mirrors and tracing paper to identify symmetry, squared paper to draw shapes	Right angle testers, dotted paper, angles in shapes, angles on grids, rulers, different triangles, different quadrilaterals, mirrors, tracing paper, squared paper
Geometry: Position & Direction	⇒ Describe positions on a 2-D grid as coordinates in the first quadrant ⇒ Describe movements between positions as translations of a given unit to the left/right and up/down ⇒ Plot specified points and draw sides to complete a given polygon	Summer 6	Coordinates, x-axis, y-axis, axes, 2-D grid, left, right, up, down, translation, corresponding vertices	Using square paper to plot coordinates, moving physical manipulatives on grids	Squared paper, 2-D grids, rulers, 2-D shapes to translate
Statistics: Present and Interpret	⇒ Interpret and present discrete and continuous data using appropriate graphical	Summer 4	Bar charts, pictograms, tables, data, tally charts, axes, scale, time line	Using and reading bar charts, pictograms,	Bar charts, pictograms, tables, tally charts, time graphs

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	methods, including bar charts and time graphs		graphs, discrete, continuous	tables, tally charts, time graphs	
Statistics: Solve Problems	⇒ Solve comparison, sum and difference problems using information presented in bar charts, picograms, tables and other graphs	Summer 4	Bar charts, pictograms, tables, data, tally charts, axes, scale, add, subtract, plus, minus, take away, time line graphs, discrete, continuous, estimate	Using and reading bar charts, pictograms, tables, tally charts, time graphs	Bar charts, pictograms, tables, tally charts, time graphs