Year 3 Maths Curriculum Overview - 2020

Topic	National Curriculum Objectives	Term Covered	Vocabulary	Key Problem Solving Strategies	Useful Resources
Place Value: Counting	⇒ Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	Autumn 1 Autumn 3	More, less, greatest, least, increase, decrease, times table, double	Skip counting in multiples of 4, 8, 10, 50 and 100; using number tracks, bar models, hundred squares, 5 times table to help with 50 times table	Number tracks, (empty) number lines, counters, objects or similar, bar models, hundred squares
Place Value: Represent	⇒ Identify, represent and estimate numbers using different representations ⇒ Read and write numbers up to 1000 in numerals and in words	Autumn 1	Ones, tens, hundreds, digits, part, whole, place value, place value column, interval	Using number tracks, base 10 equipment, place value grids, place value counters, part-whole models	Number tracks, base 10 equipment, objects to group (e.g. straws), place value grids and counters, part-whole models, (empty) number lines
Place Value: Use PV and Compare	⇒ Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) ⇒ Compare and order numbers up to 1000	Autumn 1	Ones, tens, hundreds, digits, part, whole, place value, place value column, more, less, greatest, least, ascending, descending, increase, decrease	Using number tracks, base 10 equipment, place value grids, place value counters, part-whole models	Number tracks, base 10 equipment, objects to group (e.g. straws), place value grids and counters, part-whole models, (empty) number lines
Place Value: Problems & Rounding	⇒ Solve number problems and practical problems involving these ideas	Autumn 1	Ones, tens, hundreds, digits, part, whole, place value, place value column	Skip count in multiples of 100; using number tracks, base 10 equipment, place value grids, place	Number tracks, base 10 equipment, objects to group (e.g. straws), place value grids and counters, part-whole models, (empty)

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				value counters, part-whole models	number lines
Addition & Subtraction: Recall, Represent, Use	⇒ Estimate the answer to a calculation and use inverse operations to check answers	Autumn 2	Equal to, add, sum, subtract, take away, plus, minus, number sentence, partition, part, whole, calculation, inverse, estimate, commutative	Partitioning; using number lines, part-whole models, known number bonds, bar models, mental arithmetic, column addition, column subtraction	Part-whole models, place value grids, number lines, bar models
Addition & Subtraction: Calculations	⇒ Add and subtract numbers mentally, including: ⇒ A three-digit number and ones ⇒ A three-digit number and tens ⇒ A three digit number and hundreds ⇒ Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	Autumn 2	Ones, tens, hundreds, equal to, add, sum, subtract, take away, plus, minus, number sentence, place value, place value columns, place holder, partition, part, whole, exchange, regroup, calculation, commutative	Partitioning; skip counting in 10s; counting backwards in 10s; using counting on, near subtraction base 10 equipment, place value grids, known number bonds, mental arithmetic, column addition, column subtraction	Base 10 equipment, part-whole models, place value grids, number lines, place value counters, place value arrow cards
Addition & Subtraction: Solve Problems	⇒ Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	Autumn 2	Ones, tens, hundreds, equal to, add, sum, subtract, take away, plus, minus, number sentence, place value, place value columns, place holder, partition, part, whole,	Partitioning; skip counting in 10s; counting backwards in 10s; using counting on, near subtraction, base 10 equipment, number lines, place value grids, part-whole models, bar models,	Base 10 equipment, part-whole models, place value grids, number lines, place value counters, place value arrow cards, bar models

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			exchange, regroup, calculation, inverse, commutative	column addition, column subtraction, mental arithmetic, known number bonds	
Multiplication & Division: Recall Represent, Use	⇒ Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Autumn 3	Equal groups, number sentence, altogether, lots of, multiply, divide, sharing, grouping, inverse, times table, double, partition, commutative	Skip counting in 3s, 4s, 8s; sharing and grouping with concrete manipulatives; using repeated addition, bar models, arrays, hundred squares	Objects or similar, bar models, arrays, hundred squares
Multiplication & Division: Calculations	⇒ Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	Autumn 3 Spring 1	Equal groups, number sentence, altogether, lots of, multiply, divide, sharing, grouping, inverse, times table, double, partition, array, repeated addition, repeated subtraction, column multiplication, exchange, ones, tens, hundreds, equal rows, equal groups, place value, place value column, divisor, remainder, 'times as many', total, commutative	Skip counting in 3s, 4s; sharing and grouping with concrete manipulatives; using repeated addition, column multiplication, bar models, arrays, hundred squares	Objects or similar, bar models, arrays, hundred squares, number lines
Multiplication &	⇒ Solve problems, including	Spring 1	Number sentence,	Skip counting;	Arrays, objects or

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Division: Solve Problems	missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects		array, times table, multiply, divide, repeated addition, repeated subtraction, column multiplication, partition, exchange, ones, tens, hundreds, equal rows, equal groups, place value, place value column, divisor, remainder, 'times as many', total, commutative	sharing and grouping with concrete manipulatives; using arrays, repeated addition, column multiplication, part-whole diagrams, number lines, bar models, hundred squares	similar, base 10 equipment, part-whole diagrams, number lines, bar models
Fractions: Recognise and Write	⇒ Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 ⇒ Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ⇒ Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	Spring 5	Unit fraction, non-unit fraction, denominator, numerator, whole, partition, equivalent, tenth, equal parts, decimals, interval, division, operation, exchange	Shading; sharing a number of objects; using part-whole models, bar models, tens frames, (empty) number lines, place value grids and counters	Part-whole models, objects, bar models, tens frames, counting sticks, (empty) number lines, place value counters, items for variance: money, clocks (etc)
Fractions: Compare	⇒ Recognise and show, using diagrams, equivalent fractions with small	Summer 1	Equivalent, whole, unit fractions, non-unit fractions,	Folding strips/circles of paper; drawing bars; using bar	Cuisenaire/number rods, paper strips/ circles, number lines,

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	denominators ⇒ Compare and order unit fractions, and fractions with the same denominators		numerator, denominator, twelfth, half, third, quarter, sixth, equal parts, times tables, largest, smallest	models	bar models
Fractions: Calculations	⇒ Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]	Summer 1	Fractions, numerator, denominator, whole, twelfth, half, third, quarter, sixth, equal parts, times tables, total, add, subtract, partition	Folding strips/circles of paper; drawing bars; using bar models	Cuisenaire/number rods, paper strips/ circles, number lines, bar models
Fractions: Solve Problems	⇒ Solve problems that involve all of the above	Spring 5 Summer 1	Equivalent, whole, unit fractions, non-unit fractions, numerator, denominator, twelfth, tenth, half, third, quarter, sixth, equal parts, times tables, largest, smallest, total, add, subtract, partition, decimals, interval, division, operation, exchange	Folding strips/circles of paper; drawing bars; shading; sharing a number of objects; using bar models, part-whole models, tens frames, (empty) number lines, place value counters	Cuisenaire/number rods, paper strips/ circles, number lines, part-whole models, objects or similar, bar models, tens frames, counting sticks, (empty) number lines, place value counters, items for variance: money, clocks (etc)
Algebra	⇒ Solve problems, including missing number problems ⇒ (Note – although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing	-	-	-	-

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	number' objectives from Y1/2/3				
Measurement: Using Measures	⇒ Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Spring 4 Summer 4	Metres, centimetres, millimetres, unit of measurement, length, equivalent, shortest, tallest, longest, height, ascending, convert, calculate, difference, mixed units, perimeter	Using bar models, part-whole models, mental arithmetic	Rulers, tape measures, metre sticks, trundle wheels, objects to measure, bar models, part-whole models, 2-D shapes to measure perimeters
Measurement: Money	⇒ Add and subtract amounts of money to give change, using both £ and p in practical contexts	Spring 2	Value, coin, note, pence, pounds, total, amount, convert, add, group, add, subtract, take away, plus, minus, total, difference, change,	Counting on or back on number lines; using place value knowledge, (empty) number bonds to 100, part-whole models, bar models, practical money	Coins, notes, part-whole models, bar models, (empty) number lines,
Measurement: Time	⇒ Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks ⇒ Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon	Summer 2	Years, months, weeks, days, leap years, non-leap years, calendars, birthday, hours, minutes, noon, midday, midnight, weekend, minutes past, minutes to, Roman numeral, clock face, minute hand, hour hand, morning, afternoon, a.m., p.m., digital,	Using rhymes and songs to remember the number of days in each month, physical clocks, empty number lines to bridge over hours, number lines to support with addition and subtraction,	Calendars, clocks (digital and analogue), timetables to order, (empty) number lines, stopwatches,

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	and midnight ⇒ Know the number of seconds in a minute and the number of days in each month, year and leap year ⇒ Compare durations of events [for example to calculate the time taken by particular events or tasks]		analogue, 12-hour, 24-hour, duration, longest, shortest, longer, shorter, clockwise, anti-clockwise, measure		
Measurement: Perimeter, Area, Volume	⇒ Measure the perimeter of simple 2-D shapes	Spring 4	Millimetres, centimetres, metres, unit of measurement, length, convert, calculate, perimeter	Using bar models, mental arithmetic	Rulers, tape measures, metre sticks, trundle wheels, objects to measure, bar models, 2-D shapes
Geometry: 2-D Shapes	⇒ Draw 2-D shapes	Summer 3	2-D shapes, sides, vertices, centimetres, millimetres, measure	Drawing shapes on dotted paper, using rulers	2-D shapes, rulers
Geometry: 3-D Shapes	⇒ Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Summer 3	2-D shapes, 3-D shapes, prism, pyramid, sphere, cuboid, cube, cylinder, faces, edges, vertices, curved surface	Making 3-D shapes with straws and playdough	3-D shapes, straws and playdough to make 3-D shapes
Geometry: Angles & Lines	⇒ Recognise angles as a property of shape or a description of a turn ⇒ Identify right angles, recognise that two right angles make a half-turn, three make three quarters or a turn and four a	Summer 3	Angles, half turns, quarter turns, three-quarter turns, whole turns, clockwise, anti-clockwise, instructions, direction, north, east, south, west, right	Using rulers, right-angle testers, moving objects and themselves	Clocks, spinners, rulers, objects with a variety of angles, objects with horizontal and vertical lines, right-angle tester

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	complete turn; identify whether angles are greater than or less than a right angle ⇒ Identify horizontal and vertical lines and pairs of perpendicular and parallel lines		angle, complete turn, shape, greater, less acute, obtuse, right-angle horizontal, vertical, symmetry, parallel, perpendicular		
Statistics: Present and Interpret	⇒ Interpret and present data using bar charts, pictograms and tables	Spring 3	Pictograms, data, information, symbol, half symbol, key, bar charts, scale, table	Making pictograms, bar charts, tables	Pictograms, bar charts, tables
Statistics: Solve Problems	⇒ Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables	Spring 3	Pictograms, data, information, symbol, half symbol, key, bar charts, scale, addition, subtraction, more, fewer, table	Making pictograms, bar charts, tables	Pictograms, bar charts, tables