

Year 3 - Maths Long Term Plan

Autumn

Place Value
4 weeks

Addition and Subtraction
5 weeks

Length and Perimeter
3 weeks

Spring

Multiplication and Division
6 weeks

Statistics
2 weeks

Mass and Capacity
2 weeks

Money
2 weeks

Summer

Fractions
5 weeks

Geometry
3 weeks

Time
4 weeks

Year 3: Place Value
(4 Weeks)

Prior Knowledge: • Count to and across 100, forwards and backwards from any given number • Count, read and write numbers to 100 in numerals • Given a number, identify one more and one less • Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward • Recognise the place value of each digit in a two-digit number (tens, ones) • Compare and order numbers from 0 up to 100; use <, > and = signs • Read and write numbers to at least 100 in numerals and in words	Vocabulary: Number Count Order Compare Forwards Backwards Numerals Digit One more One less Equal to More than Less than (Fewer) Sort Represent Multiples Partitioning Recombine Ones Tens Place value Compare Numbers to 100 Hundreds Count in steps Count in multiples Estimate Numbers to 1000 Ascending Descending 10 or 100 more 10 or 100 less
Links to National Curriculum: • Count from 0 in multiples of 4, 8, 50 and 100 • Find 10 or 100 more or less than a given number • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Compare and order numbers up to 1000 • Identify, represent and estimate numbers using different representations • Read and write numbers up to 1000 in numerals and in words • Solve number problems and practical problems involving these ideas.	Assessment Criteria (Ready to Progress): • Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10 • Recognise the place value of each digit in three-digit numbers and compose and decompose three-digit numbers using standard and non-standard partitioning. • Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts
Small Steps: 1) Represent numbers to 100 2) Partition numbers to 100 3) Divide 100 into parts 4) Number line to 100 5) Hundreds 6) Represent numbers to 1,000 7) Partition numbers to 1,000 8) How many tens? 9) Flexible partitioning of numbers to 1,000	10) Hundreds, tens and ones 11) Find 1, 10 or 100 more or less 12) Previous/next multiple of 10 13) Previous/next multiple of 100 14) Number line to 1,000 15) Estimate on a number line to 1,000 16) Compare numbers to 1,000 17) Order numbers to 1,000 18) Count in 50s

Year 3: Addition and Subtraction
(5 Weeks)

Prior Knowledge:	Vocabulary:
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• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Add and subtract numbers up to 100 using concrete objects, pictorial representations, and mentally • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Add Plus Altogether Total Take away/minus Number bonds Part Whole Digit Addition/Add More Altogether Sum Total Double/near double Half/halve Subtraction Take away Minus Difference Equals Facts Problems Missing number problems 2-digit number Inverse Number bonds 3-digit number Commutative Column addition Column subtraction Exchange Estimate
Links to National Curriculum: • Add and subtract numbers mentally, including: - o A three-digit number and ones - o A three-digit number and tens - o A three-digit number and hundreds • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • Estimate the answer to a calculation and use inverse operations to check answers • Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Assessment Criteria (Ready to Progress): • Secure fluency in addition and subtraction facts that bridge 10/ • Apply place-value knowledge to known additive number facts (scaling facts by 10). • Calculate complements to 100. • Add and subtract up to three-digit numbers using columnar methods. • 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.
Small Steps: 1) Apply number bonds within 10 2) Add and subtract 1s 3) Add and subtract 10s 4) Add and subtract 100s 5) Spot the pattern (Add 1s, 10s, 100s) 6) Add 1s across a 10 7) Add 10s across a 100 8) Subtract 1s across a 10 9) Subtract 10s across a 100 10) Add two numbers (no exchange)	11) Subtract two numbers (no exchange) 12) Add two numbers (across a 10) 13) Add two numbers (across a 100) 14) Add two numbers (mixed exchange) 15) Subtract two numbers (across a 10) 16) Subtract two numbers (across a 100) 17) Subtract across 0 18) Subtract 2 numbers (mixed exchange) 19) Complements to 100 20) Estimate answers 21) Inverse operations
Year 3: Length and Perimeter (3 Weeks)	
Prior Knowledge:	Vocabulary:

• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) • Compare and order lengths and record the results using >, < and =	Measure Wider Narrow Compare Longer Shorter length Standard units Estimate Order Record results Centimetre cm Metre m Millimetre mm Perimeter
Links to National Curriculum: • Measure, compare, add and subtract lengths (m/cm/mm) • Measure the perimeter of simple 2-D shapes	Assessment Criteria (School Set): • 10mm = 1cm • Calculate the perimeter of a regular 2D shape or a rectangle
Small Steps: 1) Measure in metres and centimetres 2) Measure in millimetres 3) Measure in centimetres and millimetres 4) Metres, centimetres and millimetres 5) Equivalent lengths (metres and centimetres) 6) Equivalent lengths (centimetres and millimetres) 7) Compare lengths 8) Add lengths 9) Subtract lengths 10) What is perimeter? 11) Measure perimeter 12) Calculate perimeter	

Year 3: Multiplication and Division (6 Weeks)	
Prior Knowledge: • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Vocabulary: Double Half Twice as many Equal Unequal Share Group Odd Even Multiplication Division Arrays Row Column Count in... Lots of Groups of..

• Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals (=) signs • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	Times Multiple Repeated addition Share Divide Multiplication tables Commutative Exchange Mathematical statements Derived facts Product Multiples Factors Scale up
Links to National Curriculum: • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • 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 • Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	Assessment Criteria (Ready to Progress): • Apply known multiplication and division facts to solve contextual problems with different structures, including quotative and partitive division.
Small Steps: 1) Multiplication - equal groups 2) Use arrays 3) Multiples of 2 4) Multiples of 5 and 10 5) Sharing and grouping 6) Multiply by 3 7) Divide by 3 8) The 3 times-table 9) Multiply by 4 10) Divide by 4 11) The 4 times-table 12) Multiply by 8 13) Divide by 8	14) The 8 times-table 15) The 2, 4 and 8 times-tables 16) Multiples of 10 17) Related calculations 18) Reasoning about multiplication 19) Multiply a 2-digit number by a 1-digit number - no exchange 20) Multiply a 2-digit number by a 1-digit number - with exchange 21) Link multiplication and division 22) Divide a 2-digit number by a 1-digit number - no exchange 23) Divide a 2-digit number by a 1-digit number - exchange 24) Scaling 25) How many ways?

Year 3: Statistics (2 Weeks)	
Prior Knowledge: • interpret and construct simple pictograms, tally charts, block diagrams and simple tables • ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	Vocabulary: Pictograms Tally chart Tally Vote Represent Block diagram Category Sorting Totalling Comparing Horizontal Vertical Popular Table Bar chart Carroll diagram Venn diagram Axis Diagram Frequency table

ask and answer questions about totalling and comparing categorical data.	
Links to National Curriculum: - Interpret and present data using bar charts, pictograms and tables - Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts, pictograms, and tables.	Assessment Criteria (School Set): Read pictograms and bar charts with a key/scale of 1, 2, 5 or 10
Small Steps: - Interpret pictograms - Draw pictograms - Interpret bar charts - Draw bar charts - Collect and represent data - Tables - Two-way tables	

Year 3: Mass and Capacity
(2 Weeks)

Prior Knowledge: - Choose and use appropriate standard units to estimate and measure mass (kg/g) and capacity (litres/ml) to the nearest appropriate unit, using scales and measuring vessels - Compare and order mass and volume/capacity and record the results using >, < and =	Vocabulary: Height Long Short Weight Capacity Heavy/light Heavier than Lighter than Full/empty More than Less than Half/half full Mass Volume Holds Scales Container Weigh Balances Kilogram kg Gram g Quarter Three quarters Litres L Millimetres ml Temperature Degrees
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Links to National Curriculum:	Assessment Criteria (School Set):
• Measure, compare, add and subtract mass (kg/g) and volume/capacity (l/ml)	• 1kg = 1,000g • 1 litre = 1,000ml
Small Steps: 1) Measure mass in grams 2) Measure mass in kilograms and grams 3) Equivalent masses (kilograms and grams) 4) Compare mass 5) Add and subtract mass 6) Measure capacity and volume in millilitres 7) Measure capacity and volume in litres and millilitres 8) Equivalent capacities and volumes (litres and millilitres) 9) Compare capacity and volume 10) Add and subtract capacity and volume	

Year 3: Money (2 Weeks)	
Prior Knowledge: • Recognise and know the value of different denominations of coins and notes • Recognise and use symbols for pounds (£) and pence (p) • Combine amounts to make a particular value • Find different combinations of coins that equal the same amounts of money • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Vocabulary: Money Coins Notes Pounds £ Pence p Value Change
Links to National Curriculum:	Assessment Criteria (School set):

• Add and subtract amounts of money to give change, using both £ and p in practical contexts	• Calculate change from £1, £2 and £5
Small Steps: 1) Pounds and pence 2) Convert pounds and pence 3) Add money 4) Subtract money 5) Find change	

Year 3: Fractions (5 Weeks)	
Prior Knowledge: • Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{2}$, $\frac{1}{4}$ And $\frac{3}{4}$ Of a length, shape, set of objects or quantity • Write simple fractions for example, $\frac{1}{2}$ of 6² • Recognise the equivalence of $\frac{2}{4}$ And $\frac{1}{2}$	Vocabulary: Whole Half Quarter Equal parts Three quarters Third Equivalent fractions Unit fractions Non unit fractions Numerator Denominator One whole Tenths Compare and order Tenths
Links to National Curriculum:	Assessment Criteria (Ready to Progress): • Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.

- 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 - Recognise and show, using diagrams, equivalent fractions with small denominators - Add and subtract fractions with the same denominator within one whole - Compare and order unit fractions, and fractions with the same denominators - Solve problems that involve all of the above.	- Find unit fractions of quantities using known division facts (multiplication tables fluency). - Reason about the location of any fraction within 1 in the linear number system. - Add and subtract fractions with the same denominator, within 1.
Small Steps: 1) Equal parts and wholes 2) Halves, quarters and thirds 3) Understand the denominators of unit fractions 4) Compare and order unit fractions 5) Understand the numerators of non-unit fractions 6) Understand the whole 7) Compare and order non-unit fractions 8) Fractions and scales 9) Fractions on a number line	10) Count in fractions on a number line 11) Equivalent fractions on a number line 12) Equivalent fractions as bar models 13) Shade equivalent fractions 14) Add fractions 15) Subtract fractions 16) Partition the whole 17) Unit fractions of a set of objects 18) Non-unit fractions of a set of objects 19) Tenths

Year 3: Geometry
(3 Weeks)

Prior Knowledge: - Recognise and name common 2-D and 3-D shapes - Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line - Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces - Identify 2-D shapes on the surface of 3-D - Use mathematical vocabulary to describe position, direction and movement	Vocabulary: 2d shapes Rectangle Square Circle Triangle Characteristics 3d shapes Cuboids Cubes Cone Spheres Curved Straight Flat Group Sort Sides Corners Properties Pyramids Faces Pentagon Hexagon Cylinder Octagon Hollow Solid Line of symmetry Symmetrical Mirror line Reflection Pattern Repeating pattern Properties Edges Vertices Vertex Right angle triangle Heptagon Polygon Properties Prism Horizontal Vertical Perpendicular lines Parallel lines Orientations Angles Acute Obtuse Turn Right angles Half turn Three quarters of a turn Greater than a right angle Less than a right angle
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• Rotation as a turn in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise).	Horizontal lines Vertical lines Perpendicular lines Parallel lines Reflex angles Degrees Over Under Between Around Through On Into Next to Behind Beneath Order Repeat Patterns On top of Position Direction Movement Whole turn Quarter turn Half turn Three-quarter turn Left Right Forwards Backwards Clockwise/anticlockwise Straight line Rotation Arrange Sequences Degree
Links to National Curriculum: • Draw 2-D shapes and make 3-D shapes using modelling materials • Recognise 3-D shapes in different orientations and describe them • 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 of a turn and four a 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.	Assessment Criteria (Ready to Progress): • Recognise right angles as a property of shape or a description of a turn and identify right angles in 2D shapes presented in different orientations. • Draw polygons by joining marked points and identify parallel and perpendicular sides.
Small Steps: 1) Turns and angles 2) Right angles 3) Compare angles 4) Measure and draw accurately 5) Horizontal and vertical 6) Parallel and perpendicular	7) Recognise and describe 2-D shapes 8) Lines of symmetry 9) Draw polygons 10) Recognise 3-D shapes 11) Describe 3-D shapes (faces, edges, vertices) 12) Make 3-D shapes

Year 3: Time (4 Weeks)	
Prior Knowledge: • Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] • Measure and begin to record the time (hours, minutes, seconds) • Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] • Recognise and use language relating to dates, including days of the week, weeks, months and years • Compare and sequence intervals of time	Vocabulary: Seasons Time Quicker Slower Earlier Later Before After First Next Today Yesterday Tomorrow Morning Afternoon Evening Day Week Hour Minutes Chronological order Days of the week Months of the year Month Year O'clock Half past Second Intervals of time Quarter past/to Duration Analogue Roman numerals 12-hour clock 24-hour clock Am/pm Noon Midnight Leap year Digital

• Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times • Know the number of minutes in an hour and the number of hours in a day.	
Links to National Curriculum: • 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 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].	Assessment Criteria (School Set): • 60 seconds = 1 minutes • 365 days in a year / 366 in a leap year. • Number of days in each month
Small Steps: 1) Tell the time to o'clock, quarter past, half past, quarter to 2) Tell the time to 5 minutes (past) 3) Tell the time to 5 minutes (to) 4) Roman numerals to 12 5) Tell the time to the minute 6) Read time on a digital clock (past) 7) Read time on a digital clock (to)	8) Use a.m. And p.m. 9) Years, months and days 10) Days and hours 11) Hours and minutes - use start and end times 12) Hours and minutes - use durations 13) Minutes and seconds 14) Units of time 15) Solve problems with time