

Links to Curriculum Drivers

Expressive Communicators

Healthy Champions

World Citizens

Open to Possibilities

Life-Long Learners



Ridgeway Primary school

Maths skills progression



Threshold Concept	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and place value	Numbers to 10 -Represent compare and explore numbers -One more and one less -Doubling and halving Numbers to 20 -Identify, represent compare and order numbers to 20 -One more and one less -Doubling and halving Numbers to 50 -2-digit numbers – represent,	Numbers within 100 -Read, write, represent, partition, compare and order numbers to 100 -Explore patterns including, odds and evens, tens and ones Numbers within 1000 -Represent in different ways -Compare using symbols -Read scales	Number sense and exploring calculation strategies -Read, write, order and compare numbers to 100 -Calculate mentally using known facts, round and adjust, near doubles, adding on to find the difference -Derive new facts from a known fact Place value -Read, write, represent, partition, order and compare 3-digit numbers -Find 10 and 100 more or less	Reasoning with large numbers -4 digit place value. -Read, write, represent, order and compare -Find 10, 100 or 1000 more or less -Round numbers to the nearest 10, 100 or 1000 Reasoning with patterns and sequences -Roman numerals up to 100 -Place value of other number systems -Number sequences and patterns	Reasoning with large whole integers -Read, write, order and compare numbers up to one million -Round numbers within one million to the nearest multiple of powers of ten -Read Roman numerals up to M Problem solving -Investigate numbers: consecutive, palindromic, multiples	Number -Use negative numbers in context, and calculate intervals across zero -Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit -Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit -Round any whole number to a required degree of accuracy Place value

	sequence, explore, compare. -Count in 2s, 5s and 10s -Describe and complete number patterns Numbers 50 to 100 and beyond -Read, write, represent, compare and order numbers to 100 -One more / fewer, ten more / fewer -Identify number patterns		-Round to the nearest multiple of 10 and 100 Exploring calculation strategies and place value -Add and subtract mentally -Find 10, 100 and 1000 more or less -Order and compare beyond 1000 -Round numbers			-Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit -Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1 000 where the answers are up to three decimal places Problem solving -Solve problems containing all of the above
Addition and Subtraction	Addition and subtraction within 10 -Represent and explain addition and subtraction -Commutativity -Addition and subtraction facts Addition and subtraction within 20 -Model, explain and choose addition and	Addition and subtraction of 2 digit numbers -Apply number bonds to add and subtract -Represent and explain addition and subtraction of two 2-digit numbers. -Add three 1-digit numbers -Illustrate, represent and explain addition	Addition and subtraction of numbers with up to 3 digits -Develop and use a range of mental calculation strategies (adding a 3 digit number and ones, tens and hundreds, make ten) -Illustrate and explain formal written methods (column method)	Addition and subtraction of numbers with up to 4 digits -Select appropriate strategies to add and subtract -Illustrate and explain appropriate addition and subtraction strategies including column method with regrouping	Integer addition and subtraction -Use rounding to estimate -Use a range of mental calculation strategies to add and subtract integers -Illustrate and explain the written method of column addition and subtraction	Mental calculation -Perform mental calculations, including with mixed operations and large numbers -Use their knowledge of the order of operations to carry out calculations involving the four operations Inverse, estimating and checking -Use estimation to check answers to calculations and

	subtraction strategies -Represent and explain addition and subtraction strategies -Use known facts to add and subtract -Illustrate, explain and link addition and subtraction with equations -Apply 'Make Ten' strategy -Use language to quantify and compare difference Further addition and subtraction -Explore addition and subtraction involving 2-digit numbers and ones -Represent and explain addition and subtraction with regrouping -Investigate number bonds within 20	and subtraction involving regrouping including 'Make Ten', 'Round and adjust' and near doubles strategies Addition and subtraction word problems -Introduction to bar models as a representation -Create, label and sketch bar models Exploring calculation strategies -Apply addition and subtraction strategies to solve equations -Illustrate and explain addition and subtraction using column method			-Select efficient calculation strategies Problem solving -Negative numbers and calculating intervals across zero -Calculating the mean Calculate with whole numbers and decimals -Mental strategies to add and subtract involving decimals -Formal written strategies to add, subtract and multiply involving decimals	determine, in the context of a problem, levels of accuracy. Problem solving -Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
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Multiplication and Division	Multiplication and division -Share equally into groups -Doubling -Link halving to fractions -Add equal groups -Explore arrays	Multiplication and division 2, 5 and 10 -Calculate the times tables of 2, 5, and 10 by skip counting -Relate the 2 times table to doubling -Explore representations of multiplication and division -Commutativity Multiplication and division, 3 and 4 -Multiplication and division facts for 3 and 4 -Relate 4 times table to doubling the 2 times tables -Describe, interpret and represent using arrays and bar models -Recognise inverse relationship	Multiplication and division -Multiplication and division facts for 2, 3, 4, 5, 6, 8 and 10 -Multiplicative structures: equal groups/parts, change and comparison, correspondence problems -Relationships: commutativity and inverse Deriving multiplication and division facts -Multiply and divide by 10 and 100 -Multiply a 2-digit number by 2, 3, 4, 5 and corresponding division situations -Divide 2-digit by a 1-digit Securing Multiplication and Division -Recall and use multiplication and division facts for 6 and 8 times table	Multiplication and division -Distributive property including multiplying three 1-digit numbers -Mental multiplication and division strategies using place value and known and derived facts -Short multiplication and division Securing Multiplication and Division -Identify and explore patterns in multiplication tables including 7 and 9	Multiplication and division -Identify multiples and factors -Investigate prime numbers -Multiply and divide by 10, 100 and 1000 (integers) -Derived facts -Illustrate and explain formal multiplication and division strategies such as short and long -Use a range of mental calculation strategies Calculate with whole numbers and decimals -Multiply and divide by 10, 100 and 1000 involving decimals -Derive multiplication facts involving decimals Problem solving -Interpret remainders	Mental calculation -Perform mental calculations, including with mixed operations and large numbers Written calculation -Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication -Divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context Number properties -Identify common factors, common
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						multiples and prime numbers Order of operations -Use their knowledge of the order of operations to carry out calculations involving the four operations Inverse, estimating and checking -Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy Problem solving -Solve problems involving addition, subtraction, multiplication and division
Ratio and Proportion						-Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts -Solve problems involving the calculation of percentages [for example, of

						measures, and such as 15% of 360] and the use of percentages for comparison -Solve problems involving similar shapes where the scale factor is known or can be found -Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
Fractions, Decimals and Percentages	Fractions -Identify $\frac{1}{2}$ and $\frac{1}{4}$ of a shape or object -Find $\frac{1}{2}$ and $\frac{1}{4}$ of a quantity	Fractions -Part-whole relationships -Fractions as part of a whole or a whole set -Relate to division -Equivalent fractions	Fractions -Part-whole relationships -Fractions as part of a whole or a whole set and as a number -Add, subtract, compare and order fractions	Fractions -Explore different interpretations and representations of fractions -Equivalent fractions -Represent fractions greater than one as mixed number and improper fractions -Add and subtract fractions with the same denominator including fractions greater than one Decimals -Decimal equivalents to tenths, quarters and halves -Compare and order numbers with same	Fractions -Represent, identify, name, write, order and compare fractions (including improper and mixed numbers) -Calculate fractions of amounts -Add, subtract fractions with denominators that are multiples of the same number -Multiply fractions (and mixed numbers) by a whole number Decimals	Fractions and decimals -Deepen understanding of equivalence -Order, simplify and compare fractions, including those greater than one -Recall equivalence between common fractions and decimals -Add and subtract fractions -Represent multiplication involving fractions -Multiply two proper fractions -Divide a fraction by an integer -Recall equivalence between common fractions and decimals

				number of decimal places -Multiply and divide by 10 and 100 including decimals	-Read, write, order and compare decimals -Round decimals to the nearest whole number Percentages -Explore percentage, decimal, fractions equivalence	-Find decimal quotients using short division -Use fractions to express proportion Percentages -Calculate and compare percentages of amounts -Connect percentages with fractions -Explore the equivalence of fractions, decimals and percentages
Time	-Read, write and tell the time to o'clock and half past on analogue clock -Sequencing daily activities -Whole and half turns linked to time	-Tell the time on an analogue clock: quarter past, quarter to and five minute intervals -Calculate durations of time in minutes and seconds -Sequence daily events -Minutes in an hour and hours in a day	-Tell, record, write and order the time analogue and digital -12-hour, a.m., p.m. -Measure, calculate and compare durations	-Analogue to digital, 12-hour and 24-hour -Convert between units of time		
Measures and Money	Length and mass -Compare and measure lengths and mass using cm and kg	Length and mass -Draw and measure lengths in centimetres	Length and perimeter	Area and perimeter -Perimeter of rectangles and rectilinear figures	Area and perimeter -Investigate area and perimeter of rectilinear shapes	Area and perimeter -Recognise that shapes with the same areas can have different

	-Doubling and halving Capacity and volume -Compare capacities, volumes and lengths -Explore litres -Apply understanding of fractions to capacity Money -Name coins and notes and understand their value -Represent the same value using different coins -Find change	-Use <, > and = to compare and order lengths in metres and centimetres -Weigh and compare masses in kilograms and grams Capacity and volume -Read and measure temperature -Estimate, measure and understand litres and millilitres -Compare and order capacities Money -Recognise coins and notes -Use £ and p accurately -Add and subtract amounts -Calculate change	-Measure, draw and compare lengths (mm, cm and m) -Add and subtract lengths -Calculate perimeter (mm, cm and m) Capacity, mass and volume -Read scales with different intervals when measuring mass and volume -Weigh and compare masses and capacities with mixed units -Estimate mass and capacity	-Area of rectangles and rectilinear and compare -Investigate area and perimeter Measure and money problems -Convert units of measure -Select appropriate units to measure -Use strategies to investigate problems: trial and improvement, organising using lists and tables, working systematically	-Estimate area of non-rectilinear shapes Converting units of measure -Convert between metric units of length, mass and capacity and units of time -Know and use approximate conversion between imperial and metric Volume -Use cube numbers and notation -Estimate volume -Convert units of volume	perimeters and vice versa -Calculate the area of parallelograms and triangles -Recognise when it is possible to use formulae for area and volume of shapes Volume -Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3) -Recognise when it is possible to use formulae for area and volume of shapes Conversion -solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate -Use, read, write and convert between standard units, converting measurements of
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						length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places -solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate -convert between miles and kilometres
Statistics		-Represent and interpret: pictograms, block diagrams, tables and tally charts.	-Collect, interpret and present data using charts and tables	-Read, interpret and construct pictograms, bar charts and time graphs -Compare tables, pictograms and bar charts	-Complete, read and interpret data presented in line graphs -Read and interpret timetables including calculating intervals	-Interpret and construct pie charts and line graphs and use these to solve problems -Calculate and interpret the mean as an average
Shape and Space	Shape and pattern -Identify, describe, sort and	Face, shapes and patterns; lines and turns	Angles and shape -Identify angles including right angles and	Shape and symmetry -Classify, compare and order angles	Angles -Classify, compare and order angles	Shape -Recognise, describe and build simple 3-D

	classify 2-D and 3-D shapes -Investigate repeating patterns -Use and follow instructional and positional language	-Explore, sort and describe 2-D shapes -Lines of symmetry in 2-D shapes -Identify 2-D shapes on 3-D shapes -Compare and sort 2-D and 3-D shapes -Use language to describe position, direction and rotation to follow a route	recognise as a quarter of a turn -Identify and draw parallel and perpendicular lines -Draw/make, classify and compare 2-D and 3-D shapes -Measure the perimeter	-Compare and classify 2-D shapes (triangles and quadrilaterals) -Identify lines of symmetry Position and direction -Describe and plot using coordinates -Describe translations 3D Shape -Use understanding of 3-D shapes -Identify 3-D shapes from 2-D representations	-Measure a draw angles with a protractor -Understand and use angle facts to calculate missing angles Transformations -Coordinates in all four quadrants -Translation, rotation and reflection -Calculate intervals across zero as a context for negative numbers 2D and 3D shape -Classify 2-D shapes and reason about regular and irregular polygons -Properties of diagonals of quadrilaterals -Classify 3-D shapes -2-D representations of 3-D shapes.	shapes, including making nets -Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius -Draw 2-D shapes using given dimensions and angles -Recognise, describe and build simple 3-D shapes, including making nets -Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons Angles -Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles Position and direction -Describe positions on the full coordinate grid (all four quadrants)
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						-Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Algebra						-Express missing number problems algebraically -Find pairs of numbers that satisfy number sentences involving two unknowns -Enumerate all possibilities of combinations of two variables -Use simple formulae -Use simple formulae