Power Maths Curriculum Year 3

Term	Strand	Unit		Objectives
Autumn	Number – number and place value	1	Place value within 1,000	• Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Read and write numbers up to 1,000 in numerals and in words • Identify, represent and estimate numbers using different representations • Compare and order numbers up to 1,000 • Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • Solve number problems and practical problems involving these ideas
	Number – addition and subtraction	2	Addition and subtraction (1)	• Add and subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds • Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction • 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
	Number – addition and subtraction	3	Addition and subtraction (2)	
	Number – multiplication and division	4	Multiplication and division (1)	• 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 • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • 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

Power Maths Curriculum Year 3

Term	Strand	Unit		Objectives
Spring	Number – multiplication and division	5	Multiplication and division (2)	• 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 • 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 involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
	Measurement	6	Money	• Add and subtract amounts of money to give change, using both £ and p in practical contexts
	Statistics	7	Statistics	• 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 and pictograms and tables
	Measurement	8	Length	• Measure, compare, add and subtract: lengths (m/ cm/mm); mass (kg/g); volume/capacity (l/ml)
	Number – fractions	9	Fractions (1)	• Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • Compare and order unit fractions, and fractions with the same denominators • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • Solve problems that involve all of the above

Power Maths Curriculum Year 3

Term	Strand	Unit		Objectives
Summer	Number – fractions	10	Fractions (2)	• Recognise and show, using diagrams, equivalent fractions with small denominators • Compare and order unit fractions, and fractions with the same denominators • Add and subtract fractions with the same denominator within one whole • Solve problems that involve all of the above
	Measurement	11	Time	• Know the number of seconds in a minute and the number of days in each month, year and leap year • 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, am/pm, morning, afternoon, noon and midnight • Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24hour clocks • Compare durations of events (for example to calculate the time taken by particular events or tasks)
	Geometry – properties of shapes	12	Angles and properties of shapes	• 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 • Draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines
	Measurement	13	Mass	• Measure, compare, add and subtract: lengths (m/ cm/mm); mass (kg/g); volume/capacity (l/ml)

Power Maths Curriculum Year 4

Textbook	Strand	Unit		Objectives
Autumn	Number – number and place value	1	Place value – 4-digit numbers (1)	• Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) • Round any number to the nearest 10, 100 or 1,000 • Count in multiples of 6, 7, 9, 25 and 1,000 • Identify, represent and estimate numbers using different representations • Order and compare numbers beyond 1,000 • 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
	Number – number and place value	2	Place value – 4-digit numbers (2)	• Find 1,000 more or less than a given number • Order and compare numbers beyond 1,000 • Identify, represent and estimate numbers using different representations • Round any number to the nearest 10, 100 or 1,000 • Solve number and practical problems that involve all of the above and with increasingly large positive numbers • Count in multiples of 6, 7, 9, 25 and 1,000 • Count backwards through zero to include negative numbers • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
	Number – addition and subtraction	3	Addition and subtraction	• Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • Solve number and practical problems that involve all of the above and with increasingly large positive numbers • 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
	Measurement	4	Measure – perimeter	• Convert between different units of measure [for example, kilometre to metre; hour to minute] • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
	Number – multiplication and division	5	Multiplication and division (1)	• Recall multiplication and division facts for multiplication tables up to 12 × 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

Power Maths Curriculum Year 4

Textbook	Strand	Unit		Objectives
Spring	Number – multiplication and division	6	Multiplication and division (2)	• 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 • Multiply two-digit and three-digit numbers by a one-digit number using formal written layout • Recognise and use factor pairs and commutativity in mental calculations
	Measurement	7	Measure – area	• Find the area of rectilinear shapes by counting squares • Estimate, compare and calculate different measures, including money in pounds and pence
	Number – fractions (including decimals)	8	Fractions (1)	• Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • Recognise and show, using diagrams, families of common equivalent fractions • 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
	Number – fractions (including decimals)	9	Fractions (2)	• Add and subtract fractions with the same denominator • 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
	Number – fractions (including decimals)	10	Decimals (1)	• Recognise and write decimal equivalents of any number of tenths or hundredths • 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

Power Maths Curriculum Year 4

Textbook	Strand	Unit		Objectives
Summer	Number – fractions (including decimals)	11	Decimals (2)	• Recognise and write decimal equivalents of any number of tenths or hundredths • 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 • Compare numbers with the same number of decimal places up to two decimal places • Round decimals with one decimal place to the nearest whole number • Recognise and write decimal equivalents to ¼ , ½ , ¾ • Solve simple measure and money problems involving fractions and decimals to two decimal places
	Measurement	12	Money	• 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
	Measurement	13	Time	• Convert between different units of measure [for example, kilometre to metre; hour to minute]
	Statistics	14	Statistics	• Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
	Geometry – properties of shapes	15	Geometry – angles and 2D shapes	• Identify acute and obtuse angles and compare and order angles up to two right angles by size • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • Identify lines of symmetry in 2D shapes presented in different orientations • Complete a simple symmetric figure with respect to a specific line of symmetry
	Geometry – position and direction	16	Geometry – position and direction	• Describe positions on a 2D grid as coordinates in the first quadrant • Plot specified points and draw sides to complete a given polygon • Describe movements between positions as translations of a given unit to the left/right and up/down

Power Maths Curriculum Year 5

Textbook	Strand	Unit		Objectives
Autumn	Number – number and place value	1	Place value within 100,000	• Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit • Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 • Solve number problems and practical problems that involve all of the above • Read roman numerals to 1,000 (M) and recognise years written in roman numerals
	Number – number and place value	2	Place value within 1,000,000	• Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit • Solve number problems and practical problems that involve all of the above • Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero • Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 • Solve number problems and practical problems that involve all of the above
	Number – addition and subtraction	3	Addition and subtraction	• 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 • Add and subtract numbers mentally with increasingly large numbers • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • Estimate and use inverse operations to check answers to a calculation
	Statistics	4	Graphs and tables	• Complete, read and interpret information in tables, including timetables • Solve comparison, sum and difference problems using information presented in a line graph
	Number – multiplication and division	5	Multiplication and division (1)	• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers • 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 • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates

Power Maths Curriculum Year 5

Textbook	Strand	Unit		Objectives
	Measurement	6	Measure – area and perimeter	• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes

Power Maths Curriculum Year 5

Textbook	Strand	Unit		Objectives
Spring	Number – multiplication and division	7	Multiplication and division (2)	• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • Multiply and divide numbers mentally drawing upon known facts • 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
	Number – fractions (including decimals and percentages)	8	Fractions (1)	• Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • 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, 2/5 + 4/5 = 6/5 = 1 1/5] • Compare and order fractions whose denominators are all multiples of the same number
	Number – fractions (including decimals and percentages)	9	Fractions (2)	• Add and subtract fractions with the same denominator and denominators that are multiples of the same number
	Number – fractions (including decimals and percentages)	10	Fractions (3)	• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams
	Number – fractions (including decimals and percentages)	11	Decimals and percentages	• Read, write, order and compare numbers with up to three decimal places • Solve problems involving number up to three decimal places

Power Maths Curriculum Year 5

Textbook	Strand	Unit		Objectives
Summer	Number – fractions (including decimals and percentages)	12	Decimals	• Solve problems involving number up to three decimal places • Read, write, order and compare numbers with up to three decimal places • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents

	Geometry – properties of shapes	13	Geometry – properties of shapes (1)	• Identify:
				  ○ angles at a point and one whole turn (total 360°)
				  ○ angles at a point on a straight line and ½ a turn (total 180°)
				  ○ other multiples of 90°
				• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
				• Draw given angles, and measure them in degrees (°)
				• Use the properties of rectangles to deduce related facts and find missing lengths and angles

	Geometry – properties of shapes	14	Geometry – properties of shapes (2)	• Use the properties of rectangles to deduce related facts and find missing lengths and angles • Draw given angles, and measure them in degrees (°) • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles • Identify 3D shapes, including cubes and other cuboids, from 2D representations
	Geometry – position and direction	15	Geometry – position and direction	• 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
	Measurement	16	Measure – converting units	• Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • Solve problems involving converting between units of time
	Measurement	17	Measure – volume and capacity	• Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]

Power Maths Curriculum Year 6

Textbook	Strand	Unit		Objectives
Autumn	Number – number and place value	1	Place value within 10,000,000	• Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit • Solve number and practical problems that involve all of the above • Round any whole number to a required degree of accuracy • Use negative numbers in context, and calculate intervals across zero
	Number – addition, subtraction, multiplication and division	2	Four operations (1)	• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • 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 number using the formal written method of short division where appropriate, interpreting remainders according to the context
	Number – addition, subtraction, multiplication and division	2	Four operations (2)	• Identify common factors, common multiples and prime numbers • Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) (Year 5) • Use their knowledge of the order of operations to carry out calculations involving the four operations • Perform mental calculations, including with mixed operations and large numbers
	Number – fractions	4	Fractions (1)	• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions > 1 • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
	Number – fractions	5	Fractions (2)	• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • Multiply simple pairs of proper fractions, writing the answer in its simplest form (for example, ¼ × ½ = 1/8) • Divide proper fractions by whole numbers (for example, 1/2 ÷ 2 = 1/6) • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Use written division methods in cases where the answer has up to two decimal places
	Geometry – position and direction	6	Geometry – position and direction	• Describe positions on the full coordinate grid (all four quadrants) • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes

Power Maths Curriculum Year 6

Textbook	Strand	Unit		Objectives
Spring	Number – fractions (including decimals and percentages)	7	Decimals	• Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] • Multiply one-digit numbers with up to two decimal places by whole numbers
	Number – fractions (including decimals and percentages)	8	Percentages	• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • Compare and order fractions, including fractions > 1
	Algebra	9	Algebra	• Generate and describe linear number sequences • Express missing number problems algebraically • Use simple formulae • Find pairs of numbers that satisfy an equation with two unknowns • Enumerate possibilities of combinations of two variables
	Measurement	10	Measure – imperial and metric measures	• Use, read, write and convert between standard units, converting measurements of 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
	Measurement	11	Measure – perimeter, area and volume	• Recognise that shapes with the same areas can have different perimeters and vice versa • Recognise when it is possible to use formulae for area and volume of shapes • Calculate the area of parallelograms and triangles • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for example, mm3 and km3]
	Ratio and proportion	12	Ratio and proportion	• Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples • Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts

Power Maths Curriculum Year 6

Textbook	Strand	Unit		Objectives
Summer	Geometry – properties of shapes	13	Geometry – properties of shapes	• Draw 2-D shapes using given dimensions and angles • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • Recognise, describe and build simple 3-D shapes, including making nets
	Number – number and place value	14	Problem solving	• Solve number and practical problems that involve all of the above • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • Solve problems involving addition, subtraction, multiplication and division • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples • Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • Use, read, write and convert between standard units, converting measurements of 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 • Describe positions on the full coordinate grid (all four quadrants) • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
	Statistics	15	Statistics	• Calculate and interpret the mean as an average • Interpret and construct pie charts and line graphs and use these to solve problems