Progression in Maths

Castle Carrock Primary School

2025-2026

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value: Counting	*Count to and across 100, forwards and backwards, beginning with 0 and 1, or from any given number. * Count numbers to 100 in numerals; count in multiples of twos, fives and tens.	* Count in steps of 2, 3 and 5 from 0, and in tens from any number forward and backward.	* Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than the given number.	* Count in multiples of 6, 7, 9, 25 and 1000. * Count backwards through zero to include negative numbers.	* Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. * Count forwards and backwards with positive and negative whole numbers, including through zero.	
Place Value: Represent	*Identify and represent numbers using objects and pictorial representations. *Read and write numbers to 100 in numerals. * Read and write numbers from 1 to 20 in numerals and words.	* Read and write numbers to at least 100 in numerals and in words. * Identify, represent and estimate numbers using different representations, including the number line.	*Identify, represent and estimate numbers using different representations. *Read and write numbers up to 1000 in numerals and words.	*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.	* Read, write, (order and compare) numbers to at least 1,000,000 and determine the value of each digit. * Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	*Read, write, (order and compare) numbers up to 10,000,000 and determine value of each digit.

Place Value: Use PV and compare	*Given a number, identify one more and one less.	*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.	*Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) *Compare and order numbers up to 1000.	*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.	*(Read, write) order and compare numbers to at least 1,000,000 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.
Place Value: Problems & Rounding		*Use place value and number facts to solve problems.	*Solve number problems and practical problems involving these ideas.	*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.	*Interpret negative numbers in context. *Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000. *Solve number problems 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. *Solve number and practical problems that involve all of the above.

Addition & Subtraction: Recall, represent, use	*Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs. *Represent and use number bonds and related subtraction facts within 20.	*Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. *Show that addition of two number 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.	*Estimate the answer to a calculation and use inverse operations to check answers.	* Estimate and use inverse operations to check answers.	*Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.	

Addition & Subtraction: Calculations	*Add and subtract one-digit and two-digit numbers to 20, including zero.	*Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ▪ a two-digit number and ones. ▪ a two-digit number and tens. ▪two-digit numbers * adding three one-digit numbers.	*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.	*Add and subtract numbers with up to 4 digits using the formal written method of columnar addition and subtraction where appropriate.	*Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). * Add and subtract numbers mentally with increasingly large numbers.	*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.

Addition & Subtraction: Solve problems	*Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as 7 = □ -9	*Solve problems with addition and subtraction: ▪ using concrete objects and pictorial representations, including those involving numbers, quantities and measures. ▪ applying their increasing knowledge of mental and written methods.	*Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction.	*Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	*Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. *Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	* Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Multiplication & Division: Recall, Represent, use		*Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. *Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	*Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	*Recall and use 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. *Recognise and use factor pairs and commutativity in mental calculations.	*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 (non-prime) numbers. *Establish whether a number up to 100 is prime and recall prime numbers up to 19. *Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)	*Identify common factors, common multiples and prime numbers. *Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Multiplication & Division: Calculations		*Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.	* Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including the two-digit numbers times one-digit numbers, using the mental and progressing to formal written methods.	*Multiply two-digit and three-digit numbers by a one-digit number using formal layout.	*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.	*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 long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. *Divide numbers up to 4 digits by a two-digit number using the formal written method for short division where appropriate, interpreting remainders according to the context. *Perform mental calculations, including with mixed operations and large numbers.

Multiplication & Division: Solve problems	*Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	*Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	*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.	* 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 in which n objects are connected to m objects.	* Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. *Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	*Solve problems involving addition, subtraction, multiplication and division.
Multiplication & Division: Combined operations					* Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	*Use their knowledge of the order of operations to carry out calculations involving the four operations.

Fractions: Recognise and write	*Recognise, find and name a half as one of two equal parts of an object, shape or quantity. *Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	* Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.	*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.	*Count up and down in hundredths; recognise that hundredths arise from dividing an object by 100 and dividing tenths by ten.	*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, $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$	
Fractions: Compare		*Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$	*Recognise and show, using diagrams, equivalent fractions with small denominators. *Compare and order unit fractions, and fractions with the same denominators.	* Recognise and show, using diagrams, families of common equivalent fractions.	* Compare and order fractions whose denominators are all multiples of the same number.	*Use common factors, to simplify fractions; use common multiples to express fractions in the same denomination. *Compare and order fractions, including fractions >1.

Fractions: Calculations		*Write simple fractions for example, $\frac{1}{2}$ of 6 = 3	*Add and subtract fractions with the same denominator within one whole (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$)	*Add and subtract fractions with the same denominator.	* Add and subtract fractions with the same denominator and denominators that are multiples of the same number. * Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	* Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. * Multiply simple pairs of proper fractions, writing the answer in its simplest for (for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$) * Divide proper fractions by whole numbers (for example, $\frac{1}{3} \div 2 = \frac{1}{6}$)
Fractions: Solve problems			* Solve problems that involve all of the above.	* 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.		

Decimals: Recognise and write				*Recognise and write decimal equivalents of any number of tenths and hundredths. *Recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$	*Read and write decimal numbers as fractions (for example, $0.71 = \frac{71}{100}$) *Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	*Identify the value of each digit in numbers given to three decimal places.
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.	* Round decimals with two decimal places to the nearest whole number and to one decimal place. *Read, write, order and compare numbers with up to three decimal places.	

Decimals: Calculations and 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.	*Solve problems involving numbers up to three decimal places.	*Multiply and divide numbers by 10, 100 and 1,000 giving answers up to three decimal places. *Multiply one-digit numbers with up to two decimal places by whole numbers. *Use written division methods in cases where the answer has up to two decimal places. *Solve problems which require answers to be rounded to specified degrees of accuracy.

Fractions, decimals & percentages				*Solve simple measure and money problems involving fractions and decimals to two decimal places.	*Recognise the percent symbol (%) and understand that percent relates to ‘ number of parts per hundred’ and write %s as a fraction with denominator 100, and as a decimal. *Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.	*Associate a fraction with division and calculate decimal fraction equivalents (for example 0.375) for a simple fraction (for example $\frac{3}{8}$) *Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

Ratio & proportion						*Solve problems involving the relative sizes of two quantities where missing values can be found 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.

Algebra	*Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as $7 = \square - 9$	*Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	*Solve problems, including missing number problems.			*Use simple formulae *Generate and describe linear number sequences. *Express missing number problems algebraically. *Find pairs of numbers that satisfy an equation with two unknowns. *Enumerate possibilities of combinations of two variables.

Measurement: Length/height/ distance	*Compare, describe and solve practical problems for: *Lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] *Measure and begin to record the following: *Lengths and heights	*Choose and use appropriate standard units to estimate and measure *Length/height in any direction (m/cm); *Using rulers, compare and order lengths and record the results using >, < and =	*Measure, compare, add and subtract: lengths (m/cm/mm)	*Convert between different units of measure [for example, kilometre to metre; hour to minute]	*Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre ;) *Understand and use approximate equivalences between metric units and common imperial units such as inches. *Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	*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 length from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places *Convert between miles and kilometres

Measurement: Mass/Weight	*Compare, describe and solve practical problems for: *Mass/weight [for example, heavy/light, heavier than, lighter than] *Measure and begin to record the following: *Mass/weight	*Choose and use appropriate standard units to estimate and measure mass (kg/g); scales, *compare and order mass and record the results using >, < and =	*Measure, compare, add and subtract: mass (kg/g);		*Convert between different units of metric measure (for example, gram and kilogram ;) *Understand and use approximate equivalences between metric units and common imperial units such as pounds *Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	*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 mass from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places.

Measurement: Capacity & Volume	*Compare, describe and solve practical problems for: *Capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] *Measure and begin to record the following: *Capacity and volume	*Choose and use appropriate standard units to estimate and measure *Capacity (litres/ml) to the nearest appropriate unit, *Measuring vessels *Compare and order volume/capacity and record the results using >, < and =	*Measure, compare, add and subtract: volume/capacity (l/ml)		*Convert between different units of metric measure (for example, litre and millilitre) *Understand and use approximate equivalences between metric units and common imperial units such as pints. *Estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] *Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	*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 volume from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places *Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]

Measurement: Money		*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	*Add and subtract amounts of money to give change, using both £ and p in practical contexts	*Estimate, compare and calculate different measures, including money in pounds and pence	*Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	

Measurement: Area & perimeter			*Measure the perimeter of simple 2-D shapes	*Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres *Find the area of rectilinear shapes by counting squares	*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	*Recognise that shapes with the same areas can have different perimeters and vice versa *Recognise when it is possible to use the formulae for area and volume of shapes *Calculate the area of parallelograms and triangles

Measurement: Time	*Compare, describe and solve practical problems for: *Time [for example, quicker, slower, earlier, later] *Measure and begin to record the following: *Time (hours, minutes, seconds)	*Compare and sequence intervals of time *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.	*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].	*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.	*Solve problems involving converting between units of time *Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling	*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 time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places

Properties of shape: 2D & 3D	*Recognise and name common 2-D and 3-D shapes, including: *2-D shapes [for example, rectangles (including squares), circles and triangles]	*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 shapes, [for example, a circle on a cylinder and a triangle on a pyramid] *Compare and sort common 2-D and 3-D shapes and everyday objects.	*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.	*Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	*Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	*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 *Illustrate and name parts of circle, including radius, diameter and circumference and know that the diameter is twice the radius

Properties of shape: Angles				*Identify acute and obtuse angles and compare and order angles up to two right angles by size	*Draw given angles, and measure them in degrees (°) *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° *Use the properties of rectangles to deduce related facts and find missing lengths and angles *Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Properties of shape: Symmetry			*Identify and describe the properties of 2-D shapes, including the line symmetry in a vertical line		*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.	

Position, direction & movement	*Describe position, direction and movement, including whole, half, quarter and three-quarter turns	*Order and arrange combinations of mathematical objects in patterns and sequences *Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).		*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	*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.	*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.

Using statistics		*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 *Ask and answer questions about totalling and comparing categorical data.	*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.	*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.	*Solve comparison, sum and difference problems using information presented in a line graph. *Complete, read and interpret information in tables, including timetables.	*Interpret and construct pie charts and line graphs and use these to solve problems. *Calculate and interpret the mean as an average.