Baldwins Gate Primary School – Maths Progression

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and Place Value		Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to 100 in numerals. Count in multiples of twos, fives and tens. Given a number, identify 1 more or 1 less. Identify and represent numbers using objects and pictorial representations including the number line. Use the language of: equal to, more than, less than (fewer), most, least. Read and write numbers from 1 to 20 in numerals and words	Count in steps of 2, 3, 5 and 10 from 0, forwards and backwards. Recognise the place value of each digit in a two-digit number (tens, ones). Identify, represent and estimate numbers using different representations, including the number line for numbers up to 100. Compare and order numbers from 0 up to 100; use <, > and = signs. Read and write numbers to at least 100 in numerals and words. Use place value and number facts to solve problems.	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 up to 1000 using different representations. Read and write numbers up to 1000 in numerals and in words. Solve number problems and practical problems involving the ideas above.	Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number. Count backwards through 0 to include negative numbers. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). Order and compare numbers beyond 1000. Round any number to the nearest 10, 100 or 1000. Solve number and practical problems that involve all of the above and with increasingly large positive numbers. 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. Count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000. Interpret negative numbers in context. Count forwards and backwards with positive and negative whole numbers, including through 0. 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.	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. Use negative numbers in context, and calculate intervals across zero. Solve number and practical problems that involve all of the above.
Addition and Subtraction		Read, write and interpret mathematical statements involving addition (+) and subtraction (-) and equals (=) signs. Represent and use number bonds and related subtraction facts within 20. Add and subtract one-digit and two-digit numbers to 20, including 0. Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations. Solve missing number problems.	Solve problems with addition and subtraction applying my increasing knowledge of mental and written methods. Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: TU+U, TU+T, TU+TU and U+U+U. Begin to use a formal strategy to calculate addition and subtraction.	Add and subtract numbers mentally, HTU+U, HTU+T, HTU+H. Add and subtract numbers with up to three digits, using formal written methods of columnar addition. Estimate the answer to a calculation and use inverse operations to check answers on a regular basis. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition where appropriate. Estimate and use inverse operations to check answers to a calculation up to 4 digits. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	Add and subtract whole numbers with 5 digits, including using formal written methods (columnar addition). Add and subtract numbers mentally with increasingly large numbers, using known skills such as rounding and partitioning. Use rounding and the inverse to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction multi- step problems in contexts,	Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why. Perform mental calculations, including with mixed operations and large numbers. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			Show that addition of 2 numbers can be done in any order (commutative) and know that subtraction of 1 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.			deciding which operations and methods to use and why.	
Multiplication and Division		Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Recall and use multiplication and division facts for the 3, 4, 6, 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.	Recall multiplication and division facts for multiplication tables up to 12 × 12. Use place value, known and derived facts to multiply and divide mentally with numbers up to 12x12, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Multiply two-digit and three-digit numbers by a one-digit number using formal written layout consistently. Begin to divide numbers up to 4 digits by a one-digit number using the formal written method of short division. Solve problems involving multiplying and adding, including using the associative and distributive laws to multiply two-digit numbers by one digit number. Solve integer scaling problems and harder correspondence problems	Identify multiples and factors, including finding all factor pairs of a number and common factors of 2 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 30. 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. 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. Multiply and divide numbers mentally, drawing upon known facts such as multiplication tables and multiplying by multiples of 10. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000.	Perform mental calculations, including with mixed operations and large numbers. Identify common multiples and common factors. Know prime numbers up to 50 with increasing confidence. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. 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 or long division where appropriate. Interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context. Use their knowledge of the order of operations to carry out calculations involving the four operations.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						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 my knowledge of factors and multiples, squares and cubes. Solve two and three step problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	
Fractions		Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity. Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity.	Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. Write simple fractions e.g., 1⁄2 of 6 = 3. Recognise the equivalence of 2/4 and ½.	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. Recognise, find and write fractions of a discrete set of objects: non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Add and subtract fractions with the same denominator within one whole.	Recognise and show, using diagrams, families of common equivalent fractions. Count up and down in hundredths. Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. 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. Round decimals with one decimal place to the nearest whole number. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where	Compare and order fractions whose denominators are all multiples of the same number, with up to four fractions in a set. 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. Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by	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. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1⁄4 x 1⁄2 = 1/8]. Divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6]. Associate a fraction with division and calculate decimal fraction

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				Compare and order unit fractions. Compare and order fractions with the same denominators. Solve problems that involve all of the above.	the answer is a whole number. Add and subtract fractions with the same denominator beyond one whole. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to 1⁄2 1⁄4 and 3⁄4. Compare numbers with the same number of decimal places up to two decimal places. Solve simple measure and money problems involving fractions and decimals to two decimal places.	whole numbers, supported by materials and diagrams. Read and write decimal numbers as fractions up to hundredths. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. 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. Recognise the percent symbol (%) and understand that percent relates to 'number of parts per hundred'. Write percentages as a fraction with denominator 100, and as a decimal. Solve problems involving number up to three decimal places. Solve problems which require knowing percentage and decimal equivalents of 1⁄2, 1⁄4, 1/5, 2/5 and 4/5 and those fractions with a denominator of a multiple of 10 or 25.	equivalents [for example, 0.375] for a simple fraction. 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. 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. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
Measurement		Compare, describe and solve practical problems for: lengths and heights, mass/weight, capacity and volume & time. Measure and begin to record the following: lengths and heights, mass/weight, capacity and volume & time. Recognise and know the value of different denominations of coins and notes.	Choose and use appropriate standard units to estimate and measure length/height (m/cm), mass (kg/g), temperature (°C) and capacity (l/ml) in any direction to the nearest appropriate unit. I can compare and order lengths, mass, volume/capacity and record the results using >, < and =.	Measure, compare, add and subtract: lengths (m/cm/mm), mass (kg/g), volume/capacity (l/ml). Measure the perimeter of simple 2-D shapes. Add and subtract amounts of money to give change, using both £ and p in practical contexts. Tell and write the time from an analogue clock (numbers, Roman numerals, 12/24-hour clock).	Convert between different units of time [hour to minute]. Convert between different units of measure [for example, kilometre to metre]. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Find the area of rectilinear shapes by counting squares.	Convert between different units of metric measure (for example, km/m, m/cm, cm/mm, kg/g, l/ml). Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Estimate volume (for example, using 1cm3 blocks to build cuboids and cubes) and capacity.	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, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Sequence events in chronological order using language. Recognise and use language relating to days of the week, weeks, months and years. Tell the time to the hour and half past the hour, and draw the hands on a clock to represent this.	Recognise and use symbols for pounds (£) and pence (p). Combine amounts of money 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. Write and tell the time to five minutes, including quarter past/to the hour. Draw the hands on a clock face to show times to nearest 5 minutes. Know the number of minutes in an hour and the number of hours in a day.	Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes, hours and o'clock. Use vocabulary such as 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.	Estimate, compare and calculate different measures, including money in pounds and pence. Read and write analogue and digital 12- and 24-hour clocks. 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.	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, (cm2) and (m2) and estimate the area of irregular shapes. Solve problems involving converting between units of time, including interpreting simple timetables. Use all four operations to solve problems for all of the above using decimal notation, including scaling.	decimal notation to up to three decimal places. Convert between miles and kilometres. 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 (cm^3) and (m^3), and extending to other units
Geometry - Properties of Shape		Recognise and name common 2-D shapes, including: rectangles (including squares), circles and triangles Recognise and name common 3-D shapes, including: cuboids (including cubes), pyramids and spheres	Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line. Compare and sort common 2-D and 3-D and everyday objects. Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].	Draw 2-D shapes. Make 3-D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them. Recognise that angles are 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 whether angles are greater than or less than a right angle. Identify pairs of perpendicular and parallel lines.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify acute and obtuse angles. Compare and order angles up to two right angles by size. 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.	Identity 3-D shapes, including cubes and other cuboids, from 2-D representations. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, within accuracy of 2 degrees and measure them in degrees (°), including reflex angles. Identify angles on a straight line and 1⁄2 a turn (total 180°) and other multiples of 90. Identify angles at a point and one whole turn (total 360°). Use the properties of rectangles to deduce related facts and find missing lengths and angles. Distinguish between regular and irregular polygons based on	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. Find unknown angles in any triangles, quadrilaterals, and regular polygons. Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise angles where they meet at a point, are vertically opposite or on a straight line, and find missing angles.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						reasoning about equal sides and angles.	
Geometry - Position and Direction		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. 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. Draw and reflect them in the axes.
Statistics			Recognise simple pictograms, tally charts, block diagrams and tables. Be able to ask questions about simple pictograms, tally charts, block diagrams and tables.	Interpret and present data in bar charts, pictograms and tables. Solve one-step and two-step questions such as '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. Read, interpret and complete 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.
Ratio and Proportion							Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division fact. 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

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
							grouping using knowledge of fractions and multiples.
Algebra							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.