



St. Bartholomew's C of E Primary School Stage 6 Maths

National Curriculum Strand	Sub Strand	Step 1	Step 2	Step 3	National Curriculum End of Stage Expectations
Number	Number system and counting (MA1:1)	1) Read write, order and compare numbers up to 1,000,000 and know the value of each digit.	1) Read write, order and compare numbers up to 5,000,000 and know the value of each digit.	1) Read write, order and compare numbers up to 10,000,000 and know the value of each digit.	1) Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit
		2) Round any number up to 1,000,000 to the nearest 10, 100, 1000 10,000 and 100,000.	2) Round any number up to 5,000,000 to the nearest 10, 100, 1000 10,000 and 100,000	2) Round any number up to 10,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000.	2) Round any whole number to a required degree of accuracy.
		3) Continue negative number sequences	3) Calculate intervals across zero using whole numbers	3) Calculate intervals across zero using decimal numbers	3) Use negative numbers in context, and calculate intervals across '0'
Number	Addition Subtraction Multiplication and Division (MA2:2)	4) Add and subtract with at least 4 digit including decimals numbers using formal written methods.	4) Add and subtract with at least 4 digit numbers including using formal written methods to solve one and two step problems	4) Add and subtract with at least 4 digit numbers using formal written methods to solve multi-step problems.	4) Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
		5) Multiply a single digit by 4 digit number including decimals using short multiplication.	5) Multiply a two digit number by 3 digit number using long multiplication.	5) Multiply a 4 digit number with 2 decimal places by a two digit number.	5) Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.
		6) Use short division to divide a single digit by a 4 digit number and find remainders.	6) Use long and short division to divide a two digit number by a 4 digit number and find remainders.	6) Use long and short division to divide a two digit number by a 4 digit number with decimals.	6) 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.

		7) Carry out calculations using the correct 4 operations in order.	7) Carry out calculations using the correct 4 operations in order with brackets.	7) Use the inverse to check calculations using the 4 operations and brackets	7) Use my knowledge of the order of operations to carry out calculations involving the 4 operations.
		8) Use known facts to multiply decimals number with 2dp by whole numbers.	8) Use known facts to multiply one digit number with 1dp by a whole number.	8) Use known facts to multiply and divide one digit number with 2dp by a whole number	8) Multiply one-digit numbers with up to 2 decimal places by whole numbers.
		9) Use rounding with whole numbers to can estimate an answer.	9) Use rounding with decimal numbers to can estimate an answer.	9) Use rounding in the correct context to estimate and answer.	9) Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
		10) Add and subtract mentally using multiples of 10, 100 and 1000.	10) Add and subtract mentally using decimal numbers.	10) Add and subtract mentally using whole and decimal numbers.	10) Perform mental calculations, including with mixed operations and large numbers.
	Fractions and Decimals (MA2:3)	11) Find equivalents including decimals and convert mixed numbers and improper fractions.	11) Understand the difference between multiples and factors and simplify fractions using common factors.	11) Find the lowest common denominator between to fractions	11) Use common factors to simplify fractions; use common multiples/factors to express fractions in the same denomination.
		12) Compare and order fractions with the same denominator using resources.	12) Compare and order fractions with denominators in the same multiple.	12) Compare and order fractions with different denominators	12) Compare and order fractions, including fractions >1.
		13) Add and subtract fractions with the same denominator.	13) Add and subtract fractions with different denominators.	13) Add and subtract mixed numbers.	13) Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
		14) Multiply fractions by whole numbers using diagrams and resources.	14) Multiply fractions and mixed numbers by whole numbers.	14) Multiply pairs of proper fractions and simplify the answers.	14) Multiply simple pairs of proper fractions, writing the answer in its simplest form.
		15) Divide fractions by whole numbers using diagrams and resources.	15) Divide fractions by whole numbers	15) Divide pairs of simple fractions.	15) Divide proper fractions by whole numbers.

		16) Match simple fractions to decimals and percentages equivalents e.g. $\frac{1}{2}$, $\frac{1}{4}$	16) Convert tenths, hundredths and thousands into decimal and percentage equivalents	16) Convert more complex fractions to their decimal and percentage equivalents e.g. $\frac{4}{6}$ and $\frac{4}{5}$ etc. in different contexts.	16) Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
		17) Multiply and divide by 10 using numbers up to 1dp.	17) Multiply and divide by 10 and 100 using numbers up to 2dp.	17) Multiply and divide by 100 and 1000 using numbers up to 3dp	17) Identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places.
		18) Write decimals as fractions	18) Convert tenths and hundredths into percentages and decimals	18) Compare fractions, decimals and percentages in different contexts	18) Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.
		19) Read, write, order and compare numbers with up to two decimal places	19) Read, and write numbers with up to three decimal places	19) Read, and write, order and compare numbers with up to three decimal places	19) Identify the value of each digit in numbers given to 3 decimal places
		20) Use written division methods in cases where the has remainders	20) Use written division methods in cases where the answer has up to one decimal places	20) Use written division methods in cases where the answer has up to two decimal places	20) Use written division methods in cases where the answer has up to two decimal places
	Ratio and Proportion (MA2:4)	21) To find percentages using diagrams and convert percentages into fractions and decimals	21) To find 10% and 40% of numbers and measures	21) To find 15% of numbers and measures	21) Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
		22) Use ratio and proportion to solve problems when scaling up and down.	22) Use ratio and proportion to solve problems involving multiplication and division.	22) Use ratio and proportion to solve problems in the simplest form.	22) Solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts.
	Algebra (MA2:5)	23) Use symbols and letters to represent an unknown number.	23) Use letters and numbers to simplify algebra.	23) Solve simple algebraic equations using the 4 operations.	23) Use a simple formulae and express missing number problems algebraically
		24) Interpret linear equations.	24) Use equations to generate number linear sequences.	24) Use linear equations to plot line graphs.	24) Generate and describe linear number sequences.

Geometry and Measures	Measurement (MA3:1)	25) Convert between units of capacity and length up to 2dp using mm, cm, m km, l and ml.	25) Convert between units of capacity, length, mass and time up to 3dp using kg, g, hrs, secs, mins, mm, cm, m km ,l and ml.	25) Convert between units of volume and different units of metric measurement.	25) 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 3 decimal places.
		26) Find and investigate the area and perimeter of squares, rectangles and compound shapes.	26) Calculate the area of triangles and parallelograms.	26) Investigate the area and perimeter of triangles, parallelograms, rectangles and compound shapes.	26) Calculate the area of parallelograms and triangles. Recognise that shapes with the same areas can have different perimeters and vice versa.
		27) Estimate the volume of cubes and cuboids using cubes.	27) Estimate and calculate the volume of cubes and cuboids using cm^3 and m^3 .	27) Estimate and calculate the volume of cubes and cuboids using different units e.g. mm^3 and km^3 .	27) 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].
		28) Convert metric to imperial units including inches, pounds and pints.	28) Know how many metres in 4km and 3 miles etc.	28) Accurately convert miles into km and vice versa.	29) Convert between miles and kilometres.
	Geometry Property of Shape. (MA3:2)	29) Find the missing angles and lengths of sides in rectangles.	29) Find unknown angles in triangles and quadrilaterals.	29) Find unknown angles in regular polygons	29) Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.
		30) Identify, measure and compare acute, obtuse and reflex angles.	30) Find missing angles on a straight line.	30) Find missing angles around a given point.	30) Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
		31) Label and name parts of a circle including the circumference and radius.	31) Determine the radius and diameter of a circle is twice the size.	31) Find the circumference and area of a circle.	31) Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

		32) Know the difference between regular and irregular shapes using their properties	32) Draw different shapes given a set perimeter.	32) Draw accurate shapes given the angles and dimensions	32) Draw 2-D shapes using given dimensions and angles
		33) Recognise 3-D shapes from drawings.	33) Describe 3-D models using their properties	33) Recognise and use nets of shapes to make 3-D models.	33) Recognise, describe and build simple 3-D shapes, including making nets.
	Geometry Position and Direction (MA3:3)	34) Identify the position of an object in the four quadrants.	34) Draw shapes and objects in the 4 quadrants	34) Reflect and translate shapes and objects in the 4 quadrants	34) Describe positions on the full coordinate grid.
		35) Describe translations in the 4 quadrants	35) Plots shapes after translations.	35) Plot and translate shapes in different axis.	35) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
Statistics	Statistics (MA4:1)	36) Read and interpret pie charts and line graphs.	36) Use discrete and continuous data to plot and draw line graphs and pie charts.	36) Use line graphs and pie charts to solve problems and make comparisons	36) Interpret and construct pie charts and line graphs and use these to solve problems.
		37) Use formal written methods for addition and division	37) Use the mean to find the average in a set of data	37) Solve problems involving the mean in different contexts.	37) Calculate and interpret the mean as an average.