St. Bartholomew's C of E Primary School Stage 3 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) Count in steps of 2, 3 and 5 from 0, and in tens from any number forward and backward.	1) Count from 0 in multiples of 4, 8 and 50.	1)Count from 0 in multiples of 100 form any given number	**1)Count from 0 in multiples of 4, 8, 5 and 100**
		2) Find 1 more or 1 less on a 2 or 3 digit number	2) Find 10 more or less on a 2 or 3 digit number.	2) Find 100 less from a 2 or 3 digit number.	**2) Find 10 or 100 more or less than a given number.**
		3) Recognise the place value of each digit in a 2-digit number (tens and ones).	3) Recognise the place value of a 3 digit number HTO.	3) Partition 3 digit numbers in different ways.	**3) Recognise the place value of each digit in a 3-digit number.**
		4) Compare and order numbers from 0 up to 100; use <, > and = signs.	4) Compare and order numbers from 0 up to 500; use <, > and = signs.	4)Compare and order numbers up to 1,000	**4) Compare and order numbers up to 1,000.**
		5) Read and write numbers to at least 100 in numerals and in words.	5) Read and write numbers to at least 500 in numerals.	5) Read and write numbers up to 1,000 in numerals and in words.	**5) Read and write numbers up to 1,000 in numerals and in words.**
	Addition Subtraction Multiplication and Division **(MA2:2)**	6) Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: • A 2-digit number and ones • A 2-digit number and tens • Two 2-digit numbers • o Adding three 1-digit numbers	6) Add and subtract mentally • A three digit number and ones. • A three digit number and tens	6) Add and subtract mentally • A three digit number and hundreds.	**6) Add and subtract mentally , including:** • **A three digit number and ones.** • **A three digit number and tens** • **A three digit number and hundreds.**

		7) Add and subtract numbers with up to 2 digits, using formal written methods of columnar addition and subtraction.	7) Add and subtract numbers with up to 2 digits to a 3 digit number using formal written methods of columnar addition and subtraction.	7) Add and subtract numbers 3 digits, using formal written methods of columnar addition and subtraction.	**7) Add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction.**
		8) Solve problems for missing numbers addition and subtraction.	8) Use the inverse to check calculations for addition and subtraction.	8) Use estimation to check answers for addition and subtraction.	**8) Estimate the answer to a calculation and use inverse operations to check answers.**
		9) Solve problems, including missing number problems involving place value.	9) Solve problems, including missing number problems, using number facts.	9) Solve complex addition and subtraction problems,	**9) Solve problems, including missing number problems, using known facts, place value and more complex addition and subtraction.**
		10) Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.	10) Recall and use multiplication and division for the 4 and 8 times tables.	10) Recall and use multiplication and division for the 3 times tables.	**10) Recall and use multiplication and division for the 3, 4 and 8 times tables.**
		11) Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.	11) Write and calculate mathematical statements for TO x O, using mental and then progressing to formal written methods for the 2, 5 and 10 x tables.	11) Write and calculate mathematical statements for TO x O, using mental and then progressing to formal written methods for the 3, 4 and 8 x tables.	**11) Write and calculate mathematical statements for multiplication and division using the multiplication facts that they know including TO x O, using mental and then progressing to formal written methods.**
		12) Solve problems involving multiplication and division using materials, arrays, repeated addition and mental methods in context	12) Solve problems, including missing number problems, involving multiplication and division.	12) Solve problems, including integer scaling problems and correspondence problems in which n objects are connected to m objects.	**12) Solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects.**

	Fractions **(MA2:3)**	13) Recognise, find, name and write fractions $^1/_3$, $^1/_4$, $^2/_4$ and $^3/_4$ of a length, shape, or set of objects.	13) Use non units fractions of a shape or quantity using diagrams or apparatus e.g. $^5/_6$ of 30=	13) Use formal methods to find non unit fractions of a shape or quantity e.g. $^3/_5$ of 15=	**13) Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.**
		14) Use diagrams and practical apparatus to find equivalent fractions of a half.	14) Find equivalent fractions for a $^1/_4$ and $^1/_3$ using diagrams.	14) Mentally find equivalent fractions for a $^1/_2$, $^1/_4$ and $^1/_5$.	**14) Recognise and show, using diagrams, equivalent fractions with small denominators.**
		15) Order fractions with the same denominators practically.	15) Compare fractions using the < and > practically and using diagrams	15) Compare and order fractions with the same denominator.	**15) Compare and order unit fractions, and fractions with the same denominators.**
		16) Add and subtract fractions that make a whole using apparatus e.g. $^1/_4 + ^3/_4 = 1$	16) Add and subtract fractions within a whole a whole using diagrams and apparatus e.g. $^3/_4 - ^1/_4 = ^2/_4$	16) Add and subtract fractions with in a whole using a formal method	**16) Add and subtract fractions with the same denominator within one whole.**
		17) Count forwards and backwards in tenths.	17) Divide objects into equal parts to find tenths.	17) Divide one digit numbers by 10.	**17) 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.**
		18) Solve problems to find equivalent fractions	18) Solve problem when comparing fractions	18) solve problems when adding and subtracting fractions	**18) Solve problems that involve all of the above.**
Geometry and Measures	**Measurement** **(MA3:1)**	19) Choose and use appropriate standard units to estimate and measure length/ height in any direction (m/cm); mass (kg/g); temperature (C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels.	19) Make comparisons between units of measure for example 2. 56 m is > 246 cm, 500ml is < 0.75l etc.	19) Add and subtract lengths , volume and mass using standard written methods	**19) Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).**

		20) Measure the perimeter of shapes using objects and cubes.	20) Measure the perimeter of shapes by counting squares.	20) Measure the perimeter of shapes using form methods and stands units.	**20) Measure the perimeter of simple 2-D shapes.**
		21) 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.	21) Find totals in a range of practical contexts using formal written methods.	21) Subtract money to find change, in a range of practical contexts using formal written methods.	**21) Add and subtract amounts of money to give change, using both £ and p in practical contexts.**
		22) 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.	22)Tell and write the time using one minute intervals on an analogue clock including Roman numerals	22)To read and write the timer to 1 minute intervals on a 12 hour and 24 hour digital clock.	**22) Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.**
		23) Read time to the nearest hour minute and second.	23) Estimate the duration of events in hours, minutes and seconds.	23) Compare durations of time in hours minutes and seconds using pm and am.	**23) 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.**
		24) Know the numbers of minutes in an hour, seconds in a minute days in months and year	24) Compare the numbers of minutes in an hour, seconds in a minute days in and year.	24) Solve problems involving the numbers of minutes in an hour, seconds in a minute days in and year.	**24) Know the number of seconds in a minute and the number of days in each month, year and leap year.**
	Geometry Property of Shape. (**MA3:2)**	25) To identify and describe the properties of 2-D shapes, including the number of sides (rectangles, squares, triangles, circles, pentagons, hexagons and octagons)	25) Sort 2-D shapes according to their different properties including, hexagons and octagons.	25) Draw and describe 2-D shapes in different orientations	**25) Describe and draw 2-D Shapes.**

		26) Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces	26) Sort 3-D shapes according to their different properties including, different prisms	26)Use a range of modelling materials to make 3-D shapes	**26) Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.**
		27) To describe rotation in terms of a right angles for quarter, half and three quarter turns (clockwise and anti-clockwise)	27) Name and find a range of right angles in different contexts.	27) Identify and sort angles greater or less than a right angle	**27) Identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle.**
		28) Label and name vertical, parallel and perpendicular lines.	28) Find shapes with vertical, parallel and perpendicular lines.	28) Sort shapes and objects using their amount of vertical, Parallel and perpendicular lines	**28) Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.**
Statistics	**Statistics** **(MA4:1)**	29) Interpret bar charts, pictograms and tables.	29) Construct bar charts, pictograms and tables.	29) Collect data in table and decide the best way to present it.	**29) Interpret and present data using bar charts, pictograms and tables.**
		30) Answer questions in involving g most popular and least popular.	30) Solve one step problems using bar charts tables and pictograms for example how many more than or less than.	30) Solve one step problems using bar charts, tables and pictograms.	**30) 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.**