Byerley Park Primary School
Mathematics Progression Map – Y1 to Y3

		Year 1	Year 2	Year 3
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 different multiples including ones, twos, fives and tens - Given a number, identify one more and one less - Identify and represent numbers using concrete objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least - Read and write numbers 1 to 20 in digits and words	- Count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward - Recognise the value of each digit in a two digit number (tens, ones) - Identify, represent and estimate numbers using different representation, including the number line - Compare and order numbers from 0 up to 100; use <, > and = signs - Read and number facts to solve problems - Read and write numbers to at least 100 in numerals and in words - Use place value and number facts to solve problems	- Count from 0 in multiples of 4, 8, 50 and 100; finding 10 or 100 more 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 using different representations - Read and write numbers to at least 1000 in numerals and in words - Solve number problems and practical problems involving these ideas.

Addition and subtractions		- Read, write and interpret mathematical statements involving addition (+), 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 zero
		- Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 =□ - 9.
			- Solve simple one-step 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
			- 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:
			- A two-digit number and ones
			- A two-digit number and tens
			- Two two-digit numbers
			- Adding three one-digit numbers
			  - Show that addition of two numbers 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 missing number problems
				- 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 the efficient written methods of columnar addition and subtraction
				- Estimate the answer to a calculation and use inverse operations to check answers
				- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

Multiplication and division	- Solve simple one step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	- 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 (x), division (÷) and equals (=) signs - Show that multiplications of two numbers can be done in any order (commutative and division of one number by another cannot - Solve one-step 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 and 8 multiplication tables - Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including two-digit numbers times one-digit numbers, using mental and progressing to efficient written methods - 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	- 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 1/3, ¼, 2/4, and ¾ of a length, shape, set of objects or quantity - Write simple fractions e.g. ½ of 6 = 3 and recognise the equivalent of two quarters and one half	- 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 - Recognise and show, using diagrams, equivalent fractions with small denominators - Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7 = 6/7) - Compare and order unit fractions with the same denominator - Solve problems that involve all of the above

Measures	- Compare, describe and solve practical problems for:
	  - Lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half)
	  - Mass or weight (e.g. heavy/light, heavier than, lighter than
	  - Capacity/volume (full/empty, more than/less than, quarter
	  - Time (quicker, slower, earlier, later
	Measure and begin to record the following:
	  - Lengths and heights
	  - Mass/weight
	  - Capacity and volume
	Time (hours, minutes, seconds)
	  - Recognise and know the value of different denominations of coins and notes
	  - Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening
	  - Recognise and use the language relating to dates, including 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 face to show these times.
		- 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
		- Compare and order lengths, mass, volume/capacity and record the results using <, > and =
		- Read relevant scales to the nearest numbered unit
		- 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
		- Compare and sequence intervals of time
		- Tell and write 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
			- 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 giving change, using both £ and p in practical contexts
			- Tell and write the time from an analogue clock, including using Roman numerals from 1 to X11, and 12 hour and 24 hour clocks
			- Estimate and read time to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as am/pm, 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.

Geometry: properties of shape	- Recognise and name common 2-D and 3-D shapes, including: - 2-D shapes (e.g. rectangles (including squares), circles and triangles) - 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres)	- Identify and describe the properties of 2-D shapes, including the number of sides and 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 with increasing accuracy - Recognise angles as a property of shape and associate angles with turning - 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, vertical, perpendicular and parallel lines in relation to other lines.
Geometry: position, direction, motion	- Describe position, directions and movements, including half, quarter and three-quarter turns	- Order and arrange combinations of mathematical objects in patterns - Use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)	

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 compare categorical data.	- Interpret and present data using 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.