



St James' First School

Maths Curriculum Progression Map

Reviewed November 2022

Number and Place Value.....	2
Addition and Subtraction.....	3
Multiplication and Division	4
Fractions, Decimals and Percentages	5
Ratio, Proportion and Algebra	6
Measurement.....	7
Geometry	9
Statistics	10



	Number and Place Value			
	Year 1	Year 2	Year 3	Year 4
Count	<ul style="list-style-type: none"> - Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - Count numbers to 100 in numerals; count in multiples of twos, fives and tens <p>(Autumn 1, Spring 1, Spring 3, Summer 4)</p>	<ul style="list-style-type: none"> - Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward <p>(Autumn 1)</p>	<ul style="list-style-type: none"> - Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number <p>(Autumn 1, Autumn 3)</p>	<ul style="list-style-type: none"> - Count in multiples of 6, 7, 9, 25 and 1000 • count backwards through zero to include negative numbers <p>(Autumn 1, Summer 4)</p>
Represent	<ul style="list-style-type: none"> - 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 <p>(Autumn 1 Spring 1 Spring 3 Summer 4)</p>	<ul style="list-style-type: none"> - 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 <p>(Autumn 1)</p>	<ul style="list-style-type: none"> - Identify, represent and estimate numbers using different representations - Read and write numbers up to 1000 in numerals and in words <p>(Autumn 1)</p>	<ul style="list-style-type: none"> - 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 <p>(Autumn 1)</p>
Use and Compare	<ul style="list-style-type: none"> - Given a number, identify one more and one less <p>(Autumn 1 Spring 1 Spring 3 Summer 4)</p>	<ul style="list-style-type: none"> - 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 <p>(Autumn 1)</p>	<ul style="list-style-type: none"> - Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) - Compare and order numbers up to 1000 <p>(Autumn 1)</p>	<ul style="list-style-type: none"> - 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 <p>(Autumn 1)</p>
Problems and Rounding		<ul style="list-style-type: none"> - Use place value and number facts to solve problems <p>(Autumn 1)</p>	<ul style="list-style-type: none"> - Solve number problems and practical problems involving these ideas <p>(Autumn 1)</p>	<ul style="list-style-type: none"> - 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 <p>(Autumn 1)</p>



Addition and Subtraction				
	Year 1	Year 2	Year 3	Year 4
Calculations	<ul style="list-style-type: none"> - Add and subtract one-digit and two digit numbers to 20, including zero <p>(Autumn 2, Spring 2)</p>	<ul style="list-style-type: none"> - Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> - A two-digit number and ones - Two-digit number and tens - Two two-digit numbers - Adding three one digit numbers <p>(Autumn 2)</p>	<ul style="list-style-type: none"> - Add and subtract numbers mentally, including: <ul style="list-style-type: none"> - 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 <p>(Autumn 2)</p>	<ul style="list-style-type: none"> - Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <p>(Autumn 2)</p>
Problems	<ul style="list-style-type: none"> - Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$ <p>(Autumn 2, Spring 2)</p>	<ul style="list-style-type: none"> - Solve problems with addition and subtraction: <ul style="list-style-type: none"> - Using concrete objects and pictorial representations, including those involving numbers, quantities and measures - Applying their increasing knowledge of mental and written methods <p>(Autumn 2)</p>	<ul style="list-style-type: none"> - Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction <p>(Autumn 2)</p>	<ul style="list-style-type: none"> - Solve addition and subtraction twostep problems in contexts, deciding which operations and methods to use and why <p>(Autumn 2)</p>



Multiplication and Division				
	Year 1	Year 2	Year 3	Year 4
Recall and Use		<ul style="list-style-type: none"> - 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 <p>(Spring 2)</p>	<ul style="list-style-type: none"> - Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables <p>(Autumn3, Spring1)</p>	<ul style="list-style-type: none"> - Recall multiplication and division facts for multiplication tables up to 12×12 - 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 <p>(Autumn 4, Spring 1)</p>
Calculations		<ul style="list-style-type: none"> - Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs <p>(Spring 2)</p>	<ul style="list-style-type: none"> - 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 <p>(Autumn 3, Spring 1)</p>	<ul style="list-style-type: none"> - Multiply two-digit and three-digit numbers by a one-digit number using formal written layout <p>(Spring 1)</p>
Problems	<ul style="list-style-type: none"> - 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 <p>(Summer 1)</p>	<ul style="list-style-type: none"> - Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts <p>(Spring 2)</p>	<ul style="list-style-type: none"> - 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 <p>(Spring 1)</p>	<ul style="list-style-type: none"> - 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 such as n objects are connected to m objects <p>(Spring 1)</p>



Fractions, Decimals and Percentages				
	Year 1	Year 2	Year 3	Year 4
Fractions: Recognise and Write	<ul style="list-style-type: none"> - 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 <p>(Summer 2)</p>	<ul style="list-style-type: none"> - 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 <p>(Summer 1)</p>	<ul style="list-style-type: none"> - 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 <p>(Spring 3)</p>	<ul style="list-style-type: none"> - Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. <p>(Spring 4, Summer 1)</p>
Fractions: Compare		<ul style="list-style-type: none"> - Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ <p>(Summer 1)</p>	<ul style="list-style-type: none"> - Recognise and show, using diagrams, equivalent fractions with small denominators - Compare and order unit fractions, and fractions with the same denominators <p>(Spring 3)</p>	<ul style="list-style-type: none"> - Recognise and show, using diagrams, families of common equivalent fractions <p>(Spring 4)</p>
Fractions: Calculations		<ul style="list-style-type: none"> - write simple fractions for example, $\frac{1}{2}$ of $6 = 3$ <p>(Summer 1)</p>	<ul style="list-style-type: none"> - Add and subtract fractions with the same denominator within one whole (for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) <p>(Summer 1)</p>	<ul style="list-style-type: none"> - Add and subtract fractions with the same denominator <p>(Spring 3)</p>
Fractions: Solve Problems			<ul style="list-style-type: none"> - solve problems that involve all of the above <p>(Spring 3, Summer 1)</p>	<ul style="list-style-type: none"> - 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 <p>(Spring 4)</p>



Fractions, Decimals and Percentages				
	Year 1	Year 2	Year 3	Year 4
Decimals: Recognise, Write and Compare				<ul style="list-style-type: none"> - Recognise and write decimal equivalents of any number of tenths or hundredths - Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ - 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 (Spring 4, Summer 1)
Fractions, Decimals and Percentages				<ul style="list-style-type: none"> - Solve simple measure and money problems involving fractions and decimals to two decimal places (Spring 3, Spring 4, Summer1)

Ratio, Proportion and Algebra				
	Year 1	Year 2	Year 3	Year 4
Algebra	<ul style="list-style-type: none"> - Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$ 	<ul style="list-style-type: none"> - Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	<ul style="list-style-type: none"> - Solve problems, including missing number problems 	

Note – although formal algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the ‘missing number’ objectives from Y1/2/3



	Measurement			
	Year 1	Year 2	Year 3	Year 4
Using Measures	<ul style="list-style-type: none"> - Compare, describe and solve practical problems for: <ul style="list-style-type: none"> - lengths and heights - mass/weight - capacity and volume - time - Measure and begin to record the following: <ul style="list-style-type: none"> - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) <p>(Spring 4, Spring 5, Spring 6)</p>	<ul style="list-style-type: none"> - 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 = <p>(Spring 3, Spring 4)</p>	<ul style="list-style-type: none"> - Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) <p>(Spring 2, Spring 4)</p>	<ul style="list-style-type: none"> - Convert between different units of measure [for example, kilometre to metre; hour to minute] - Estimate, compare and calculate different measures <p>(Spring 2, Summer 3)</p>
Money	<ul style="list-style-type: none"> - Recognise and know the value of different denominations of coins and notes <p>(Summer 5)</p>	<ul style="list-style-type: none"> - 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 <p>(Spring 1)</p>	<ul style="list-style-type: none"> - Add and subtract amounts of money to give change, using both £ and p in practical contexts <p>(Summer 2)</p>	<ul style="list-style-type: none"> - estimate, compare and calculate different measures, including money in pounds and pence <p>(Summer 2)</p>



Measurement				
	Year 1	Year 2	Year 3	Year 4
Time	<ul style="list-style-type: none"> - Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] - Recognise and use 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 <p>(Summer 6)</p>	<ul style="list-style-type: none"> - 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 <p>(Summer 2)</p>	<ul style="list-style-type: none"> - 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] <p>(Summer 3)</p>	<ul style="list-style-type: none"> - 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 <p>(Summer 3)</p>
Perimeter, area and Volume			<ul style="list-style-type: none"> - Measure the perimeter of simple 2-D shapes <p>(Spring 2)</p>	<ul style="list-style-type: none"> - Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres - Find the area of rectilinear shapes by counting squares <p>(Autumn 3, Spring 2)</p>



Geometry				
	Year 1	Year 2	Year 3	Year 4
2D Shapes	<ul style="list-style-type: none"> - Recognise and name common 2- D shapes [for example, rectangles (including squares), circles and triangles] <p>(Autumn 3)</p>	<ul style="list-style-type: none"> - Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line - 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 shapes and everyday objects <p>(Autumn 3)</p>	<ul style="list-style-type: none"> - Draw 2-D shapes <p>(Summer 4)</p>	<ul style="list-style-type: none"> - Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes - Identify lines of symmetry in 2-D shapes presented in different orientations <p>(Summer 4)</p>
3D Shapes	<ul style="list-style-type: none"> - Recognise and name common 3- D shapes [for example, cuboids (including cubes), pyramids and spheres] <p>(Autumn 3)</p>	<ul style="list-style-type: none"> - Recognise and name common 3- D shapes [for example, cuboids (including cubes), pyramids and spheres] - Compare and sort common 3-D shapes and everyday objects <p>(Autumn 3)</p>	<ul style="list-style-type: none"> - Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them <p>(Summer 4)</p>	
Angles and Lines			<ul style="list-style-type: none"> - 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 <p>(Summer 4)</p>	<ul style="list-style-type: none"> - Identify acute and obtuse angles and 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 <p>(Summer 4)</p>



Geometry				
	Year 1	Year 2	Year 3	Year 4
Position and Direction	<ul style="list-style-type: none"> - Describe position, direction and movement, including whole, half, quarter and three-quarter turns <p>(Summer 3)</p>	<ul style="list-style-type: none"> - 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 anticlockwise) <p>(Summer 4)</p>		<ul style="list-style-type: none"> - 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 <p>(Summer 6)</p>

Statistics				
	Year 1	Year 2	Year 3	Year 4
Present and Interpret Data		<ul style="list-style-type: none"> - Interpret and construct simple pictograms, tally charts, block diagrams and simple tables <p>(Summer 3)</p>	<ul style="list-style-type: none"> - Interpret and present data using bar charts, pictograms and tables <p>(Summer 5)</p>	<ul style="list-style-type: none"> - Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs <p>Summer 5)</p>
Solve Statistical Problems		<ul style="list-style-type: none"> - 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 <p>(Summer 3)</p>	<ul style="list-style-type: none"> - 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 <p>(Summer 5)</p>	<ul style="list-style-type: none"> - Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs <p>(Summer 5)</p>