St James Maths Long Term Plan

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	Autumn 1 (7)	Autumn 2 (7)	Spring 1 (5)	Spring 2 (6)	Summer 1 (6)	Summer 2 (6)
Year 6 The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in	Number: Place Value - *Read and write, numbers up to 10 000 000 and determine the value of each digit [6NPV-2]* Number: Addition and Subtraction - *solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why [6AS/MD-1], [6AS/MD-2]* Number: Multiplication and Division	Number: Place Value - *compare numbers up to 10 000000* Number: Multiplication and Division - *multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication* - *identify common multiples* Number: Fractions - *add and subtract fractions with different denominators and mixed numbers, using*	Number: Place Value - *use negative numbers in context, and calculate intervals across zero* Number: Multiplication and Division - *divide numbers up to 4-digits by a two-digit whole number using the formal written method of short division where appropriate for the context and interpret remainders as whole number remainders, fractions, or by rounding, as*	Number: Place Value - *round any whole number to a required degree of accuracy [6NPV-3]* Number: Addition and Subtraction - *perform mental calculations, including with mixed operations and large numbers* Number: Multiplication and Division - *identify prime numbers* - *use their knowledge of the order of operations to carry out*	3 Weeks before SATS Consolidation and Revision	*N/A*

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arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and	- *identify common factors* Number: Fractions - *identify the value of each digit in numbers given to three decimal places [6NPV-1]* - *use common factors to simplify fractions; use common multiples to express fractions in the same denomination [6F-1]* Geometry: Position and Direction - *describe positions on the full coordinate grid (all four quadrants)* Number: Decimals	*the concept of equivalent fractions* - *compare and order fractions, including fractions >1 [6F-2], [6F-3]* Geometry: Position and Direction - *draw and translate simple shapes on the coordinate plane* Number: Decimals - *multiply one-digit numbers with up to two decimal places by whole numbers* Number: Percentages - *recall and use equivalences between simple*	*appropriate for the context* Number: Fractions - *multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $^1/_4 \times {}^1/_2 = {}^1/_8$)* Number: Decimals - *multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places* Number: Algebra - *enumerate all possibilities of combinations of two variables*	*calculations involving the four operations* Number: Fractions - *divide proper fractions by whole numbers (e.g. $^1/_3 \div 2 = {}^1/_6$)* Geometry: Position and Direction - *reflect simple shapes on the coordinate plane* Number: Decimals - *associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $^3/_8$)*		

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confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. <u>Rapid Recall</u> • *MG – 6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2,4 5 and 10 equal parts, and read scales/number lines with labelled intervals divide into 2,4, 5 and 10 equal parts.*	- *recall and use equivalences between simple fractions and decimals, including in different contexts.* Number: Algebra - *express missing number problems algebraically* - *use simple formulae* Measurement: Converting Units - *use, read, write and convert between standard units, converting measurements of length, from a smaller unit of measure to a larger unit, and*	*fractions, decimals and percentages, including in different contexts.* Number: Algebra - *find pairs of numbers that satisfy number sentences involving two unknowns [6AS/MD-4]* Measurement: Converting Units - *use, read, write and convert between standard units, converting measurements of volume from a smaller unit of measure to a larger unit, and*	Measurement: Converting Units - *use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places* Measurement: Area, Perimeter and Volume - *calculate the area of parallelograms* Number: Ratio - *solve problems involving the calculation of*	- *use written division methods in cases where the answer has up to two decimal places* Number: Algebra - *generate and describe linear number sequences* Measurement: Converting Units - *convert between miles and kilometres* Measurement: Area, Perimeter and Volume - *calculate, estimate and compare volume of cubes and cuboids using standard units,*		

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	vice versa, using decimal notation to up to three decimal places Measurement: Area, Perimeter and Volume - *recognise that shapes with the same areas can have different perimeters and vice versa* Geometry: Properties of Shape - *compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles [6G-1]* - *recognise angles where they meet*	*vice versa, using decimal notation to up to three decimal places* Measurement: Area, Perimeter and Volume - *calculate the area of triangles* Geometry: Properties of Shape - *compare and classify geometric shapes based on their properties and sizes and find unknown angles in any quadrilaterals, and regular polygons* - *draw 2-D shapes using given dimensions and angles*	*percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison [6AS/MD-3]* Geometry: Properties of Shape - *recognise, describe and build simple 3-D shapes, including making nets [6G-1]*	*including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3.* Number: Ratio - *solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts [6AS/MD-3]* Geometry: Properties of Shape - *illustrate and name parts of circles, including radius, diameter and*		

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	at a point, are on a straight line, or are - *vertically opposite, and find missing angles* Statistics - *interpret and construct line graphs and use these to solve problems*	Statistics - *calculate and interpret the mean as an average*		*circumference and know that the diameter is twice the radius* Statistics - *interpret and construct pie charts and use these to solve problems*		

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Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | **Year 6**

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition, Subtraction, Multiplication and Division				Number: Fractions				Geometry: Position and Direction	Consolidation
Spring	Number: Decimals		Number: Percentages		Number: Algebra		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Number: Ratio		Consolidation
Summer	Geometry: Properties of Shape		Problem Solving			Statistics		Investigations				Consolidation

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