Year 6 Curriculum Map – Maths
Number and Calculation

St Christopher Primary

The teaching of mathematics in **Key Stage 2** should ensure pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources (concrete objects, measuring tools, etc.). At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

Half Term 1 Numbers to 100,000 (including decimals) Calculation – Addition and Subtraction Multiplication and Division	Half Term 2 Number beyond 100,000 Calculation – Addition and Subtraction Multiplication and Division	Half Term 3 Number to 1,000,000 Multiplication and Division	Half Term 4 Numbers beyond 1,000,000 Fractions Decimals and Percentages Multiplication and Division	Half Term 5 Numbers to 10,000,000 Fractions Decimals and Percentages	Half Term 6 Numbers beyond 10,000,000 Fractions Decimals and Percentages
Number and place value - Solve number problems and practical problems that involve all of the below.					
Round any whole number to a required degree of accuracy. Round decimal numbers to the nearest whole number (2dp).	Round any whole number to a required degree of accuracy. Round decimal numbers to the nearest whole number (2dp).	Round any whole number to a required degree of accuracy. Round decimal numbers to the nearest whole number (2dp).	Identify the value of each digit to 3 decimal places.	Identify the value of each digit to 3 decimal places	Round decimals with three decimal places to the nearest whole number and to one decimal place.
6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).		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 divided into 2, 4, 5 and 10 equal parts	Use negative numbers in context, and calculate intervals across zero.	Use negative numbers in context, and calculate intervals across zero.	6NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts
Count, read and write numbers					
Read, write, order and compare numbers up to 100,000 and determine the value of each digit. Partition digits	Read, write, order and compare numbers up to 100,000 and determine the value of each digit. Partition digits	Read, write, order and compare numbers up to 1,000,000 and determine the value of each digit. Partition digits	Read, write, order and compare numbers up to 1,000,000 and determine the value of each digit. Partition digits	Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. Partition digits	6NPV-2 Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit (including decimal numbers). Partition digits
Algebra					
		Express missing number problems algebraically.	Find pairs of numbers that satisfy an equation involving two unknowns.		
			Generate and describe linear number sequences.		
		Use simple formulae.	Enumerate possibilities of combinations of two variables.		
Addition and Subtraction Estimating and using inverse operations to check answers to a calculation. Solve addition and subtraction multi-step problems in context, deciding which operations and methods to use and why. Estimate to check answers.					
Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.
6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).	6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding	6AS/MD–4 Solve problems with 2 unknowns.			
Perform mental calculations, including with mixed operations and large number.	Perform mental calculations, including with mixed operations and large number.	Perform mental calculations, including with mixed operations and large number.	Perform mental calculations, including with mixed operations and large number.	Perform mental calculations, including with mixed operations and large number.	Perform mental calculations, including with mixed operations and large number.
Use their knowledge of the order of operations to carry out calculations involving the four operations.	Use their knowledge of the order of operations to carry out calculations involving the four operations.	Use their knowledge of the order of operations to carry out calculations involving the four operations.	Use their knowledge of the order of operations to carry out calculations involving the four operations.	Use their knowledge of the order of operations to carry out calculations involving the four operations.	Use their knowledge of the order of operations to carry out calculations involving the four operations.
Multiplication and Division - Solving problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. Estimate to check answers.					
Identify common factors, common multiples and prime and square numbers.	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.	Consolidation of the Autumn term.	Identify common factors, common multiples prime and square numbers.	Perform mental calculations, including with mixed operations and large numbers.	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.
Use their knowledge of the order of operations to carry out calculations involving the four operations.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.	6AS/MD–4 Solve problems with 2 unknowns.	Use their knowledge of the order of operations to carry out calculations involving the four operations.	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.	
Perform mental calculations, including with mixed operations and large numbers.	Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.			Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	
Fractions, Ratio and Proportion – Solve problems involving any of the below.					
6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value. 6F-3 Compare and order fractions, including fractions >1.	Compare and order fractions, including fractions >1.	Recognise, find and write fractions of a discrete set of objects; unit fractions and non-unit fractions with any denominator.	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.
Count up and down in tenths, hundredths and thousandths; recognise that thousandths arise when dividing an object or number by one thousand and dividing hundredths by 10.	6F-1 Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.		Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = 1/8$).	Solve problems involving similar shapes where the scale factor is known or can be found.	Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = 1/8$).
	Associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8).		Divide proper fractions by whole numbers (e.g.1/3 ÷ 2 = 1/6).	Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. 6AS/MD–3 Solve problems involving ratio relationships	Divide proper fractions by whole numbers (e.g.1/3 ÷ 2 = 1/6).

Decimals and Percentages - Solve problems which require answers to be rounded to specified degrees of accuracy (solving problems involving number up to three decimal places).					
Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places.	Solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison.	Solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison.	Solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison.	Use written division methods in cases where the answer has up to two decimal places.	Use written division methods in cases where the answer has up to two decimal places.
	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	Multiply one-digit numbers with up to two decimal places by whole numbers.	Multiply one-digit numbers with up to two decimal places by whole numbers.

Year 6 Curriculum Map – Maths
Geometry, Measurement and Statistics

Half Term 1 Numbers to 10,000	Half Term 2 Number beyond 10,000 Geometry - Shape	Half Term 3 Number to 100, 000 Geometry - Shape Measurement – Length Statistics	Half Term 4 Numbers beyond 100,000 Measurement – Area and Perimeter Geometry – Shape, Position and Direction Area and Perimeter	Half Term 5 Numbers to 1 000,000 Angles Volume, Mass and Time Geometry - Position and Direction	Half Term 6 Numbers beyond 1,000,000 Shape, Position and Direction Volume, Mass and Time Statistics
	Geometry - Shape				
	Daw 2-D shapes using given dimensions and angles.	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.		
	Revise the names of 2d and 3d shapes		**6G–1** Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.		
	Revise the name quadrilaterals and triangles.				
	Recognise, describe and build simple 3-D shapes, including making nets.	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	Complete a symmetric figure with respect to a specific line of symmetry, including diagonal lines and reflecting in four quadrants.		
			Geometry – Position and Direction		
			Describe positions on the full coordinate grid (all four quadrants).	Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	Describe positions on the full coordinate grid (all four quadrants).
					Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
	Measurement - Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate.				
		Convert between miles and kilometres.	Recognise that shapes with the same areas can have different perimeters and vice versa.	Use, read, write and convert between standard units, converting measurements of mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places.	Use, read, write and convert between standard units, converting measurements of mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places.
		Use, read, write and convert between standard units, converting measurements of length from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places.	Recognise when it is necessary to use the formulae for area and volume of shapes.		Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3) and extending to other units, such as mm^3 and km^3.
			Calculate the area of parallelograms and triangles.		
	Statistics				
		Interpret and construct pie charts and line graphs and use these to solve problems.	Calculate and interpret the mean as an average.		
		Solve comparison, sum and difference problems using information presented in line graphs and graphs with two sets of data.			