



St Peter's Maths Curriculum Overview – Year 5

(Some blocks may continue into start of the next term if all small steps have not been covered.)
 (Non-number blocks may also be taught out of sequence by teachers covering part-time class teachers.)

Autumn	Number Place value (3 weeks)	Number Addition and subtraction (2 weeks)	Number Multiplication and division A (3 weeks)	Number Fractions A (4 weeks)		
Spring	Number Multiplication and division B (3 weeks)	Number Fractions B (2 weeks)	Number Decimals and percentages (3 weeks)	Measurement Perimeter and area (2 weeks)	Statistics (2 weeks)	
Summer	Geometry Shape (3 weeks)	Geometry Position and direction (2 weeks)	Number Decimals (3 weeks)	Number Negative numbers (1 week)	Measurement Converting units (2 weeks)	Measurement Volume (1 week)

Year 5 Maths Small Steps Curriculum Overview - Autumn Term

Number: Place Value (Numbers up to 1,000,000)	Number: Addition and Subtraction	Number: Fractions
◆ Build on knowledge of Roman numerals from Year 3 to represent numbers to 1,000. (Use 'Lucky Cows Drink Milk' to remember value of the letters — L = 50, C = 100, D = 500 and M = 1,000.) ◆ Read represent and write numbers to 10,000 in numbers and words and mentally add and subtract 10, 100 and 1,000 to and from a given number using place value knowledge. ◆ Read, write and represent numbers to 100,000 – understand the value of each digit in the number. ◆ Read, write and represent numbers to 1,000,000 – understand the value of each digit in the number. ◆ Consolidate reading and writing numbers to 1,000,000 in digits and words. ◆ Understand powers of 10 – that numbers increase by a factor of 10 when numbers move to the left on a place value chart. ◆ Mentally find 10, 100, 1,000, 10,000, 100,000 more or less than a given number. ◆ Partition and flexibly partition numbers to 1,000,000. E.g. $15,875 = 14,875 + 1,000$ or $13,475 + 2,400$. ◆ Label, identify, estimate and find missing numbers on blank or partially completed number lines to 1,000,000. ◆ Compare and order numbers to 100,000 using comparative language and inequality symbols. ◆ Compare and order numbers to 1,000,000 and place numbers on a number line. ◆ Round 3 and 4 digit numbers to the nearest 10, 100 or 1,000. ◆ Round any number within 10,000 to the nearest 10, 100, 1,000, or 10,000. ◆ Round any number up to 1,000,000 to any power of 10 up to 100,000.	◆ Use place value knowledge to mentally add and subtract multiples of 10. (Use compensation and adjustment methods.) ◆ Add whole numbers with more than four digits using formal written method. ◆ Subtract whole numbers with more than four digits using formal written method. ◆ Round addition and subtraction calculations to check answers. ◆ Use inverse operations to check accuracy of calculations or find unknown numbers. ◆ Solve multi-step addition and subtraction problems. ◆ Explore the structure of a calculation in order to make a comparison. ◆ Solve missing number problems by comparing calculations.	◆ Find fractions equivalent to a unit fraction. (e.g. $1/3 = 3/9$) ◆ Find fractions equivalent to a non unit fraction (E.g. $2/3 = 4/9$) ◆ Recognise equivalent fractions. ◆ Convert improper fractions to mixed numbers. ◆ Convert mixed numbers to improper fractions. ◆ Compare fractions less than 1. ◆ Order fractions less than 1. ◆ Compare and order fractions greater than 1. ◆ Add and subtract fractions with the same denominator. ◆ Add two or three fractions with different denominators that total less than 1. ◆ Add two or more fractions where the total is more than 1. Convert answer to mixed number. ◆ Add a whole number or fraction to a mixed number. ◆ Add two mixed numbers. ◆ Subtract fractions (Where the denominator of one fraction is a multiple of the other.) ◆ Subtract a whole number or a fraction from a mixed number. ◆ Subtract from a mixed number. (Breaking the whole.) ◆ Subtract two mixed numbers.
	Number: Multiplication and Division ◆ Understand the definition of multiple (a multiple occurs when a number is multiplied by a positive integer and find multiples of given numbers. ◆ Find common multiples of pairs of numbers. ◆ Consolidate factor knowledge. Explore the relationship between factors and multiples. Understand that factors often come in pairs but sometimes there is a repeated factor. ◆ Explore common factors that are shared by two or more numbers. ◆ Define prime numbers (a number with exactly 2 factors) and composite numbers (numbers with more than 2 factors). Recall prime numbers to 19 and determine whether numbers to 100 are prime. ◆ Explore square numbers using manipulatives and understand a square number is created when a number is multiplied by itself. Introduce the notation for squared (2). ◆ Understand that a cube number is created when a number is multiplied by itself, then itself again. Introduce the notation for cubed (3). ◆ Multiply whole numbers by 10, 100 and 1,000. ◆ Divide whole numbers by 10, 100, 1,000. (To leave whole numbers) ◆ Mentally multiply and divide numbers by multiples of 10, 100 and 1,000.	

Year 5 Maths Small Steps Curriculum Overview – Spring Term

Multiplication & Division	Number: Decimals	Number: Fractions
◆ Multiply up to a 4-digit number by a 1-digit number. ◆ Multiply a 2-digit number by a 2-digit number (area/grid method). ◆ Multiply a 2-digit number by a 2-digit number (Formal written method.). ◆ Multiply a 3-digit number by a 2-digit number. (Formal written method.) ◆ Multiply a 4-digit number by a 2-digit number (Formal written method.) ◆ Solve problems involving multiplication using both the formal written method and efficient mental strategies. ◆ Introduce formal written method for short division to divide 2 and 3-digit numbers by a 1-digit number. ◆ Divide a 4-digit number by a 1-digit number. ◆ Divide with remainders. ◆ Choose efficient or most appropriate method to solve division problems in a range of contexts. ◆ Solve problems with multiplication and division and develop understanding of the remainder when performing a division word problem in a range of contexts.	◆ Understand place value of decimals up to 2 decimal places. ◆ Consolidate understanding of equivalent fractions and decimals when working with tenths. ◆ Explore equivalent fractions and decimals when working with hundredths. ◆ Explore equivalent fractions and decimals focusing on halves, quarters, fifths and tenths. ◆ Write thousandths as fractions and understand that a thousandth is a whole split into 1,000 equal parts. Relate thousandths to hundredths and tenths. ◆ Write thousandths as decimals and relate to fraction equivalents. ◆ Represent numbers with up to 3 decimal places on a place value chart. ◆ Order and compare decimals. (With same number of decimal places.) ◆ Order and compare any decimals with up to 3 decimal places. ◆ Round numbers with 1 and 2 decimals places to the nearest whole number. ◆ Round numbers with 2 decimal places to 1 decimal place. ◆ Introduce percentages. Understand that 'per cent' relates to 'number of parts per 100'. When a whole is split into 100 equal parts this represents 1%. ◆ Relate percentages to fractions. $1/10 = 10\%$, $2/10 = 20\%$, $1/4 = 25\%$ etc.. ◆ Relate percentages to decimals. E.g. If $10\% = 0.1$ and $1\% = 0.01$ then $11\% = 0.11$ ◆ Find equivalent fractions, decimals and percentages.	◆ Multiply a unit fraction by an integer and relate multiplication to repeated addition. E.g. $1/5 \times 4 = 1/5 + 1/5 + 1/5 + 1/5$. ◆ Multiply a non-unit fraction by an integer e.g. $3/5 \times 2 = 6/5 = 1 \frac{1}{5}$ (Converting an improper fraction to a mixed number.) ◆ Multiply mixed numbers by integers. Explore different methods to complete this calculation – repeated addition, partitioning mixed number and converting mixed number into an improper fraction. ◆ Calculate a fraction of a quantity. (Focus on concrete and pictorial models.) ◆ Calculate a fraction of an amount. (Focus on pictorial – bar models and abstract methods.) ◆ Use a fraction of an amount to find the whole (Use bar models to aid understanding.) ◆ Use fractions as operators and understand that $1/3$ of 6 is the same as $6 \times 1/3$.
		Measurement: Perimeter and Area
		◆ Find the perimeters of rectangles by measuring the sides and by calculation. ◆ Calculate the perimeters of rectilinear (compound) shapes. ◆ Find the perimeter of polygons and solve word problems. ◆ Recap definition of area and find area of shapes by counting squares. Calculate area by multiplying the length of the rectangle by the width. Use mm^2, cm^2, m^2 and km^2 notation. ◆ Find the area of rectilinear (compound) shapes. ◆ Use knowledge of counting squares to estimate the areas of non-rectilinear shapes.
		Statistics
		◆ Draw line graphs by converting data from tables/charts. ◆ Read and interpret line graphs. Use the graphs to solve problems. ◆ Read and interpret tables. ◆ Explore 2-way tables and answer questions on the data. ◆ Read and interpret a variety of timetables.

Year 5 Maths Small Steps Curriculum Overview - Summer Term

Geometry: Shape	Number: Decimals	Converting Units	
◆ Explore that an angle is a measure of a turn and that there are 360° in a full turn, 180° in half a turn, 90° in a quarter turn (or right angle) and 270° in a three-quarter turn. ◆ Visually classify an angle as acute, obtuse or reflex by comparing them to right angles and straight lines. ◆ Estimate the sizes of angles based on knowledge of what right angles and angles on a straight line look like. ◆ Use a protractor to measure angles up to 180°. ◆ Draw lines and angles accurately and construct shapes. ◆ Use knowledge that that all the angles around a point sum to 360° to calculate missing angles. ◆ Understand that the angle of half a turn and the angle on a straight line are equal to 180°. Use this fact to work out unknown angles on a straight line . ◆ Work out missing angles within shapes, both on a straight line and around a point. ◆ Explore regular and irregular polygons. Understand that a polygon is a 2-D, fully enclosed shape formed from straight lines. A 'regular' polygon has sides of equal length and angles of equal size. ◆ Name 3D shapes and identify their properties. ◆ Identify 2-D shapes on the faces of the 3-D shapes. Explore compound 3-D shapes made up of two or three simple 3-D shapes and identify which 3-D shapes were used to make the shape.	◆ Use known facts to add and subtract decimals within 1. ◆ Use number bond knowledge to 10, 100 and 1,000 to find decimal complements which make 1. E.g. 0.8 + ____ = 1 0.51 + ____ = 1 0.356 + ____ = 1 ◆ Add and subtract decimals across 1 using known facts. E.g. 6 + 7 = 13 so 0.6 + 0.7 = 1.3 ◆ Add decimal numbers with the same number of decimal places. (Use formal written method.) ◆ Subtract decimal numbers with the same number of decimal places. (Use formal written method.) ◆ Add decimal numbers with different numbers of decimal places. (Use formal column method - fill empty columns with zeros) ◆ Subtract decimals with different numbers of decimal places. (Use formal column method - fill empty columns with zeros) ◆ Explore a range of different calculation strategies to solve addition and subtraction problems efficiently. Would a mental or written method be required? ◆ Combine knowledge of number sequences and decimals to explore and extend decimal sequences. ◆ Multiply decimals by 10, 100 and 1,000. (Use place value charts to support understanding.) ◆ Divide integers and decimal numbers by 10, 100 and 1,000. (Use place value charts to support understanding.) ◆ Apply knowledge of multiplying and dividing by 10, 100 and 1,000 to work out missing values. E.g. 3.45 x ____ = 34.5, 84 ÷ ____ = 0.84	◆ Understand that prefix 'kilo' means 1,000 and use this to convert metres to kilometres and g to kilograms and vice versa. Know that $\frac{1}{2}$ kg = 500g and $\frac{3}{4}$ km = 750m ◆ Understand that 'milli' means one thousandth and use this to convert between millimetres and metres and between millilitres and litres. ◆ Convert between different units of length (mm, cm, m, km) and choose appropriate unit when carrying out measurements. ◆ Introduce imperial units of measure: inches, pounds and pints and convert between metric and imperial units. ◆ Convert between different units of time: years, months, weeks, days, hours and seconds. ◆ Use timetables to retrieve information and solve timetable problems.	
		Measurement: Volume	
		◆ Measure volume using cubes and calculate the volume of shapes in cubic centimetre (cm³) ◆ Compare the volume of shapes made from cubes with a volume of 1cm³ ◆ Estimate the volumes of objects, by using cubes with a volume of 1cm³ and building a shape similar to the 3-D object.	
		Measurement: Capacity	
		◆ Estimate the capacity of different containers. Understand that 'capacity' is the amount that something can hold whereas 'volume' is the amount that is actually in the container.	
Geometry: Position and Direction	Number: Negative Numbers		
◆ Identify the coordinates of given points on a grid and plot points with given coordinates. ◆ Solve problems involving knowledge and understanding of coordinates to identify missing co-ordinates of shapes on partially marked or unmarked grids. ◆ Translate shapes and describe the translation that has taken place when one shape has moved to different place on a grid. ◆ Identify the new coordinates of translated points/shapes. (With and without grids.) ◆ Explore shapes with multiple lines of symmetry in different orientations. ◆ Reflect shapes in horizontal and vertical lines.	◆ Explore negative numbers in real-life contexts, including temperatures, distances above and below sea level and floors in buildings that go underground. Discuss how negative numbers can be seen as a reflection of the positive numbers. Use language 'negative' rather than 'minus'. ◆ Count forwards and backwards through zero in 1s. ◆ Count forwards and backwards through zero, in multiples other than 1s. ◆ Compare and order integers that include negative numbers. ◆ Find the difference between positive and negative numbers.		