



St Mary's C of E Primary School

Mathematics Progression Document

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and Place Value	Counting	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count in multiples of twos, fives and tens from 0. Count and read numbers to 100 in numerals. Count and write numbers to 100 in numerals. Objectives covered through daily number knowledge	Count in steps of 2, 3 and 5 from 0, and in tens, from any number, forwards and backwards. Objectives covered through daily number knowledge	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. Objectives covered through daily number knowledge	Count in multiples of 6, 7, 9, 25 and 1000. Count forwards and backwards through zero to include negative numbers. Objectives covered through daily number knowledge	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000. (Interpret negative numbers in context,) count forwards and backwards with positive and negative whole numbers, including through zero. Objectives covered through daily number knowledge	
	Representing	Identify and represent numbers using objects and pictorial representations including the number line, and use the language: equal to, more than, less than (fewer), most, least. Autumn Spring Read and write numbers from 1 to 20 in numerals. Autumn Read and write numbers from 1 to 20 in words. Spring	Identify, represent and estimate numbers using different representations, including the number line. Autumn Spring Read and write numbers up to at least 100 in numerals. Autumn Read and write numbers to at least 100 in words. Spring	Identify, represent and estimate numbers using different representations. Autumn Spring Read and write numbers up to 1000 in numerals. Autumn Read and write numbers up to 1000 in words. Spring	Identify, represent and estimate numbers using different representations including measures. Autumn Spring Read Roman numerals up to 100 (I to C) and know that, over time, the numeral system changed to include the concept of zero and place value. Summer	Read, write, (order and compare) numbers up to at least 1,000,000 and determine the value of each digit e.g. what is the value of the '7' in 276,541? Find the difference between the largest and smallest whole numbers that can be made from using three digits. Autumn Spring Read Roman numerals up to 1000 (M) and recognise years written in Roman numerals. Summer	Read, write, (order and compare) numbers up to 10,000,000 and determine the value of each digit. Autumn Spring
	Rounding		Recall the multiples of 10 below and above any given 2 digit number e.g. say that for 67 the multiples are 60 and 70. Summer		Round any number to the nearest 10, 100 or 1000. Spring	Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000. Spring Summer	Round any number to a required degree of accuracy. Summer Spring Summer
	Recognising place value	Partition and combine numbers using apparatus if required e.g. partition 76 into tens and ones; combine 6 tens and 4 ones. Spring Summer Identify one more and one less of a given number. Spring	Recognise the place value of each digit in a two-digit number (tens, ones). Autumn Spring Summer Partition two-digit numbers into different combinations of tens and ones using apparatus if needed e.g. 23 is the same as 2 tens and 3 ones which is the same as 1 ten and 13 ones. Autumn Spring	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Autumn Spring Summer	Recognise the place value of each digit in a four-digit number. Autumn Spring Summer Find 1000 more or less than a given number. Autumn Spring	(Read, write,) order and compare numbers up to at least 1,000,000 and determine the value of each digit e.g. what is the value of the '7' in 276,541? Find the difference between the largest and smallest whole numbers that can be made from using three digits. Autumn Spring	Demonstrate an understanding of place value including decimals e.g. $28.13 = 28 + ? + 0.03$. Autumn Spring Summer
	Ordering and comparing		Compare and order numbers from 0 up to 100; use <, > and =. Spring Summer	Compare and order numbers up to 1000. Spring Summer	Order and compare numbers beyond 1000. Autumn		(Read, write), order and compare numbers up to 10,000,000 and determine the value of each digit. Autumn Spring

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	Problem Solving	<p>Count in twos, fives and tens to solve problems e.g. count the number of chairs in a diagram when the chairs are organised in 7 rows of 5 by counting in fives</p> <p>Spring Summer</p>	<p>Use place value and number facts to solve problems.</p> <p>Objective forms an integral part of all lessons in this topic</p> <p>Use reasoning about numbers and relationships to solve more complex problems and explain his/her thinking e.g. $29 + 17 = 15 + 14 + ?$; 'Together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have?' etc.</p> <p>Summer</p>	<p>Solve number problems and practical problems involving these ideas.</p> <p>Objectives form an integral part of all lessons in this topic</p>	<p>Solve number and practical problems that involve all of the above, and with increasingly large positive numbers.</p> <p>Objectives form an integral part of all lessons in this topic</p>	<p>Solve number problems and practical problems that involve ordering and comparing numbers up to 1,000,000, counting forwards or backwards in steps, interpreting negative numbers and rounding.</p> <p>Objectives form an integral part of all lessons in this topic</p> <p>Interpret negative numbers in context, (count forwards and backwards with positive and negative whole numbers, including through zero.)</p> <p>Autumn</p>	<p>Solve number and practical problems that involve ordering and comparing numbers</p> <p>Objectives form an integral part of all lessons in this topic</p> <p>Use negative numbers in context and calculate intervals across zero.</p> <p>Objectives covered through daily number knowledge</p>
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		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction		<p>Read and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Autumn Spring</p> <p>Write mathematical statements involving addition (+), subtraction (-) and equals (=) signs Spring Summer</p> <p>Demonstrate an understanding of the commutative law (e.g. $3 + 2 = 5$, therefore $2 + 3 = 5$) Spring Summer</p> <p>Demonstrate an understanding of inverse relationships involving addition and subtraction (e.g. if $3 + 2 = 5$, then $5 - 2 = 3$) Spring Summer</p> <p>Recall at least four of the six number bonds for 10 and reason about associated facts (e.g. $6 + 4 = 10$, therefore $4 + 6 = 10$ and $10 - 6 = 4$) Autumn</p> <p>Represent and use number bonds within 20. Autumn Spring</p> <p>Represent and use subtraction facts within 20. Autumn Spring</p>	<p>Recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If $7 + 3 = 10$, then $17 + 3 = 20$; if $7 - 3 = 4$, then $17 - 3 = 14$; leading to if $14 + 3 = 17$, then $3 + 14 = 17$, $17 - 14 = 3$ and $17 - 3 = 14$) Autumn</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Autumn</p> <p>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Autumn</p> <p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Spring Summer</p> <p>Recall doubles and halves to 20 e.g. knowing that double 2 is 4, double 5 is 10 and half of 18 is 9. Autumn Spring</p> <p>Use estimation to check that his/her answers to a calculation are reasonable e.g. knowing that $48 + 35$ will be less than 100. Summer</p>	<p>Estimate the answer to a calculation and use inverse operations to check answers. Summer</p>	<p>Estimate and use inverse operations to check answers to a calculation. Summer</p>	<p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Spring Summer</p>	<p>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Spring Summer</p>
	Recall, represent and use						



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Calculating	<p>Add one-digit and two-digit numbers to 20, including zero.</p> <p>Subtract one-digit and two-digit numbers to 20, including zero.</p> <p>Autumn Spring Summer</p>	<p>Add and subtract numbers where no regrouping is required, using concrete objects, pictorial representations, and mentally, including a two-digit number and ones</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including a two-digit number and tens.</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including two two-digit numbers.</p> <p>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including adding three one-digit numbers.</p> <p>Autumn Spring Summer</p>	<p>Add and subtract numbers mentally, including a three-digit number and ones.</p> <p>Add and subtract numbers mentally, including a three-digit number and tens.</p> <p>Add and subtract numbers mentally, including a three-digit number and hundreds.</p> <p>Add numbers with up to three digits using the formal written method of columnar addition.</p> <p>Subtract numbers with up to three digits using the formal written method of columnar subtraction.</p> <p>Autumn Spring Summer</p>	<p>Add numbers with up to 4 digits using the formal written method for column addition.</p> <p>Subtract numbers with up to 4 digits using the formal written method of columnar subtraction.</p> <p>Autumn Spring Summer</p>	<p>Add and subtract whole numbers with more than 4 digits, using formal written methods (columnar addition and subtraction).</p> <p>Add and subtract numbers mentally with increasingly large numbers.</p> <p>Autumn Spring Summer</p>	<p>Perform mental calculations with mixed operations to carry out calculations involving the four operations.</p> <p>Autumn Spring Summer</p>
	Problem Solving	<p>Solve one-step problems that involve addition, subtraction and missing numbers using concrete objects and pictorial representations.</p> <p>Objectives form an integral part of all lessons in this topic</p>	<p>Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures.</p> <p>Objectives form an integral part of all lessons in this topic</p> <p>Solve problems with addition and subtraction, applying his/her increasing knowledge of written methods and mental methods where regrouping may be required.</p> <p>Spring Summer</p> <p>Solve missing number problems using addition and subtraction.</p> <p>Summer</p>	<p>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.</p> <p>Objectives form an integral part of all lessons in this topic</p>	<p>Solve addition and subtraction two-step problems in context, deciding which operations and methods to use and why.</p> <p>Objectives form an integral part of all lessons in this topic</p>	<p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p>Objectives form an integral part of all lessons in this topic</p>

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Multiplication and Division	Recall, represent and use		<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. Objectives covered through daily number knowledge</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. Autumn</p> <p>Use multiplication facts to make deductions outside known multiplication facts e.g. know that multiples of 5 have one digit of 0 or 5 and use this to reason that 18×5 cannot be 92 as it is not a multiple of 5. Spring Summer</p> <p>Recognise the relationships between addition and subtraction and rewrite addition statements as simplified multiplication statements e.g. $10 + 10 + 10 + 5 + 5 = 3 \times 10 + 2 \times 5 = 4 \times 10$. Autumn Spring</p>	<p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Objectives covered through daily number knowledge</p>	<p>Recall multiplication and division facts for multiplication tables up to 12×12 Objective covered through daily number knowledge</p> <p>Use place value, and known and derived facts, to multiply and divide mentally including: multiplying by 0 and 1, dividing by 1, multiplying together three numbers Autumn Spring</p> <p>Recognise and use factor pairs and commutativity in mental calculations Objective covered through daily number knowledge</p>	<p>Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.</p> <p>Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</p> <p>Establish whether a number up to 100 is prime and recall prime numbers up to 19.</p> <p>Recognise and use square numbers and the notation for squared (2).</p> <p>Recognise and use cube numbers and the notation for cubed (3). Objectives covered through daily number knowledge</p>	<p>Identify common factors, common multiples and prime numbers. Autumn</p> <p>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Spring Summer</p>
	Calculating		<p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs. Autumn Spring Summer</p>	<p>Write and calculate mathematical statements for multiplication and division using the multiplication tables that he/she knows, including for two-digit numbers times one-digit numbers, using mental methods and progressing to formal written methods. Autumn Spring Summer</p>	<p>Multiply two-digit and three-digit numbers by a one-digit number using a formal written layout Autumn Spring Summer</p>	<p>Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers.</p> <p>Multiply and divide numbers mentally, drawing upon known facts.</p> <p>Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context.</p> <p>Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Autumn Spring Summer</p>	<p>Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.</p> <p>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.</p> <p>Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.</p> <p>Perform mental calculations, including with mixed operations and large numbers. Autumn Spring Summer</p>

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Problem Solving	<p>Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. Spring Summer</p> <p>Solve one-step problems involving division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. Summer</p>	<p>Solve problems involving multiplication and division, using concrete materials and mental methods. Objectives form an integral part of all lessons in this topic</p> <p>Solve problems involving multiplication and division using arrays, repeated addition and multiplication and division facts, including problems in contexts e.g. knowing that $2 \times 7 = 14$ and $2 \times 8 = 16$, explains that making pairs of socks from 15 identical socks will give 7 pairs and one sock will be left. Spring Summer</p> <p>Solve word problems involving multiplication and division with more than one step e.g. which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet. Summer</p>	<p>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. Objectives form an integral part of all lessons in this topic</p>	<p>Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one-digit numbers, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. Objectives form an integral part of all lessons in this topic</p>	<p>Solve problems involving multiplication and division, including using his/her knowledge of factors and multiples, squares and cubes. Spring</p> <p>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. Summer</p>	<p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Spring Summer</p> <p>Solve problems involving addition, subtraction, multiplication and division. Objectives form an integral part of all lessons in this topic</p>
Combined operations					<p>Solve problems involving addition, subtraction, multiplication and division, and a combination of these, including understanding the meaning of the equals sign. Autumn</p>	<p>Use his/her knowledge of the order of operations to carry out calculations involving the four operations. Spring Summer</p>

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Fractions	Recognise and write	<p>Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Spring Summer</p> <p>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. Summer</p>	<p>Recognise, find, name and write fractions $1/3$, $1/4$, $2/4$ and $3/4$ of a length, shape, set of objects or quantity and demonstrate understanding that all parts must be equal parts of the whole. Spring Summer</p>	<p>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. Autumn</p> <p>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Autumn</p> <p>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Autumn</p>	<p>Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten Autumn Spring</p> <p>Recognise and write decimal equivalents of any number of tenths or hundredths Spring</p> <p>Recognise and write decimal equivalents of $1/4$, $1/2$ and $3/4$. Spring</p>	<p>Recognise mixed numbers and improper fractions and convert from one form to the other, and write mathematical statements > 1 as a mixed number e.g. $2/5 + 4/5 = 6/5 = 1$ and $1/5$. Autumn</p> <p>Read and write decimal numbers as fractions e.g. $0.71 = 71/100$, $8.09 = 8 + 9/100$? Autumn</p> <p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Autumn</p> <p>Read, write, (order and compare) numbers with up to three decimal places. Spring Summer</p> <p>Recognise the percent symbol (%), understand that percent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. Summer</p>	<p>Identify the value of each digit in numbers given to three decimal places. Spring</p> <p>Associate a fraction with division and calculate decimal fraction equivalents e.g. know that 7 divided by 21 is the same as $7/21$ and that this is equal to $1/3$, and 0.375 is equivalent to $3/8$. Spring</p>
	Compare		<p>Recognise the equivalence of $2/4$ and $1/2$. Summer</p>	<p>Compare and order unit fractions, and fractions with the same denominators. Autumn Summer</p>	<p>Recognise and show, using diagrams, families of common equivalent fractions Autumn</p> <p>Compare numbers with the same number of decimal places (up to two decimal places) Summer</p>	<p>Identify and name equivalent fractions of a given fraction, represented visually, including tenths and hundredths. Autumn Spring</p> <p>Write equivalent fractions of a given fraction, represented visually, including tenths and hundredths. Autumn Spring</p> <p>Compare and order fractions whose denominators are multiples of the same number. Spring</p> <p>(Read, write,) order and compare numbers with up to three decimal places. Spring Summer</p>	<p>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Autumn</p> <p>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts e.g. one piece of cake that has been cut into 5 equal slices can be expressed as $1/5$ or 0.2 or 20% of the whole cake. Spring</p> <p>Compare and order fractions, including fractions > 1. Autumn</p>

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Rounding					Round decimals with one decimal place to the nearest whole number. Summer	Round decimals with two decimal places to the nearest whole number and to one decimal place. Summer	Solve problems which require answers to be rounded to specified degrees of accuracy. Spring
	Calculate	Write simple fractions for example, $1/2$ of 6 = 3 Summer	Recognise and show, using diagrams, equivalent fractions with small denominators. Summer Add fractions with the same denominator within one whole e.g. $5/7 + 1/7 = 6/7$. Summer Subtract fractions with the same denominator within one whole e.g. $6/7 - 1/7 = 5/7$. Summer	Add and subtract fractions with the same denominator Autumn Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths Spring Summer	Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Spring Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Spring	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Autumn Spring Summer Multiply simple pairs of proper fractions, writing the answer in its simplest form e.g. $1/4 \times 1/2 = 1/8$. Spring Summer Divide proper fractions by whole numbers e.g. $1/3 \div 2 = 1/6$. Spring Summer Multiply one-digit numbers with up to two decimal places by whole numbers. Spring Summer Use written division methods in cases where the answer has up to two decimal places. Spring Summer Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places. Autumn Summer	
		Problem Solving		Solve fraction problems. Autumn Summer	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 Autumn Solve simple measure and money problems involving fractions, and decimals with up to two decimal places Summer	Solve problems which require knowing percentage and decimal equivalents of $1/2$, $1/4$, $1/5$, $2/5$, $4/5$ and those fractions with a denominator of a multiple of 10 or 25. Summer Solve problems involving numbers with up to three decimal places. Spring Summer	

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Properties of Shape	2D shapes	<p>Recognise and name common 2-D shapes e.g. rectangles (including squares), circles and triangles. Autumn Summer</p>	<p>Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Spring Summer</p> <p>Name some common 2-D shapes from a group of shapes or from pictures of the shapes and describe some of their properties (e.g. triangles, rectangles, squares, circles) Autumn</p> <p>Compare and sort common 2-D shapes and everyday objects describing similarities and differences e.g. find 2 different 2-D shapes that only have one line of symmetry Spring Summer</p>	<p>Draw 2-D shapes. Spring</p>	<p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Autumn Spring Summer</p>	<p>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Autumn</p> <p>Use the properties of rectangles to deduce related facts and find missing lengths and angles. Summer</p>	<p>Draw 2-D shapes using given dimensions and angles. Autumn</p> <p>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons. Autumn Spring</p> <p>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Spring</p>
	3D shapes	<p>Recognise and name common 3-D shapes e.g. cuboids (including cubes), pyramids and spheres. Autumn Summer</p>	<p>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Spring Summer</p> <p>Name some common 3-D shapes from a group of shapes or from pictures of the shapes and describe some of their properties (e.g. cuboids, cubes, pyramids and spheres) Autumn</p> <p>Compare and sort 3-D shapes and everyday objects describing similarities and differences e.g. that a cube and a cuboid have the same number of edges, faces and vertices and describe what is different about them. Spring Summer</p> <p>Identify 2-D shapes on the surface of 3-D shapes e.g. a circle on a cylinder and a triangle on a pyramid. Autumn</p>	<p>Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. Spring</p>		<p>Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. Autumn</p>	<p>Recognise, describe and build simple 3-D shapes, including making nets. Spring</p>

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	Angles and Lines			<p>Recognise angles as a property of shape or a description of a turn. Spring Summer</p> <p>Identify right angles and identify whether other angles are greater or less than a right angle Spring Summer</p> <p>Recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn Summer</p> <p>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Summer</p>	<p>Identify acute and obtuse angles, and compare and order angles up to two right angles by size Spring</p> <p>Identify lines of symmetry in 2D shapes presented in different orientations Summer</p> <p>Complete a simple symmetric figure with respect to a specific line of symmetry Summer</p>	<p>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Spring Summer</p> <p>Draw given angles and measure them in degrees (°). Spring Summer</p> <p>Identify angles at a point and one whole turn (total 360°). Spring</p> <p>Identify angles at a point on a straight line and 1/2 a turn (total 180°). Spring</p> <p>Identify other multiples of 90°. Spring</p>	<p>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Autumn Spring</p>
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Position and Direction	Describe position, direction and movement, including whole, half, quarter and three-quarter turns. Spring	Order and arrange combinations of mathematical objects in patterns and sequences. Spring 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 anti-clockwise). Spring Summer		Describe positions on a 2D grid as coordinates in the first quadrant Spring Describe movements between positions as translations of a given unit to the left/right and up/down. Summer Plot specific points and draw sides to complete a given polygon. Spring Summer	Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. Spring Summer	Describe positions on the full coordinate grid (all four quadrants). Autumn Summer Draw and translate simple shapes on the coordinate plane, and reflect them in the axis. Autumn Summer

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Measurement	Using measure	<p>Compare, describe and solve practical problems for lengths and heights e.g. long/short, longer/shorter, tall/short, double/half. Autumn</p> <p>Compare, describe and solve practical problems for mass/weight e.g. heavy/light, heavier than, lighter than. Autumn</p> <p>Measure and begin to record mass/weight. Autumn</p> <p>Measure and begin to record length/height. Autumn</p>	<p>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. Autumn Summer</p> <p>Compare and order lengths, mass, volume/capacity and record the results using >, < and =. Autumn Summer</p>	<p>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). Autumn Spring</p>	<p>Convert between different units of measure e.g. kilometre to meter, hour to minute Autumn</p> <p>Estimate, compare and calculate different measures Autumn</p>	<p>Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). Autumn</p> <p>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Autumn</p> <p>Use all four operations to solve problems involving measure e.g. length, mass, volume, money, using decimal notation, including scaling. Summer</p>	<p>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. Autumn Summer</p> <p>Use, read, write and convert between standard units, converting measurements of length, 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. Autumn Summer</p> <p>Convert between miles and kilometres. Autumn Summer</p>
	Money	<p>Recognise and know the value of different denominations of coins and notes. Autumn Spring</p>	<p>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Autumn</p> <p>Find different combinations of coins that equal the same amounts of money. Autumn</p> <p>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. Autumn</p>	<p>Add and subtract amounts of money to give change, using both £ and p in practical contexts. Autumn</p>	<p>Estimate, compare and calculate different measures, including money in pounds and pence Summer</p>	<p>Use all four operations to solve problems involving measure e.g. length, mass, volume, money, using decimal notation, including scaling. Summer</p>	

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St Mary's C of E Primary School

Mathematics Progression Document

Time	<p>Sequence events in chronological order using language e.g. before and after, next, first, today, Yesterday, tomorrow, morning, afternoon and evening. Spring Summer</p> <p>Recognise and use language relating to dates, including days of the week, weeks, months and years. Autumn Summer</p> <p>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Summer</p> <p>Compare, describe and solve practical problems for time e.g. quicker, slower, earlier, later. Summer</p> <p>Measure and begin to record time (hours, minutes, seconds) Summer</p>	<p>Compare and sequence intervals of time. Spring</p> <p>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. Spring Summer</p> <p>Remember the number of minutes in an hour and the number of hours in a day. Spring</p> <p>Read scales in divisions of ones, twos, fives and tens Autumn</p> <p>Read scales where not all numbers on the scale are given and work out points in between. Autumn</p> <p>Read the time on a clock to the nearest 15 minutes. Spring</p>	<p>Tell the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. Spring Summer</p> <p>Write the time using an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. Spring Summer</p> <p>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. Summer</p> <p>Know the number of seconds in a minute and the number of days in each month, year and leap year. Spring Summer</p> <p>Compare durations of events e.g. calculate the time taken by particular events or tasks. Summer</p>	<p>Read, write and convert time between analogue and digital 12- and 24-hour clocks Autumn Summer</p> <p>Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days Autumn Summer</p>	<p>Solve problems involving converting between units of time. Summer</p>	<p>Use, read, write and convert between standard units, converting measurements of length, 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 Autumn Summer</p>
	Perimeter, area and volume	<p>Compare, describe and solve practical problems for capacity and volume e.g. full/empty, more than, less than, half, half full, quarter. Spring</p> <p>Measure and begin to record capacity and volume. Spring</p>	<p>Compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$. Autumn Summer</p>	<p>Measure the perimeter of simple 2-D shapes. Spring</p>	<p>Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and meters Spring</p> <p>Find the area of rectilinear shapes by counting the squares Spring</p>	<p>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. Spring</p> <p>Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes. Spring</p> <p>Estimate volume e.g. using 1cm³ blocks to build cuboids (including cubes) and capacity e.g. using water. Spring</p>

Learning, Transforming, Growing.





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		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Statistics	Present and Interpret		Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Spring Summer	Interpret and present data using bar charts, pictograms and tables. Autumn Spring	Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs Autumn Spring	Complete, read and interpret information in tables, including timetables. Spring	Interpret and construct pie charts and line graphs and use these to solve problems. Autumn Summer
	Problem Solving		Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Spring Summer Ask and answer questions about totalling and comparing categorical data. Summer	Solve one-step and two-step questions e.g. 'How many more?' and 'How many fewer?', using Information presented in scaled bar charts, pictograms and tables. Autumn Spring	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Spring	Solve comparison, sum and difference problems using information presented in a line graph. Spring	Calculate and interpret the mean as an average. Autumn Summer

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