## St John's Church of England Academy



		Maths	– Year 1			
		Number and	d Place Value			
Number and Place Value	Add	ition and Subtraction	Multiplication and Div	vision	Fractions	
Sufficient evidence shows the ability to:  ② Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. ② Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s. ② Given a number, identify 1 more and 1 less. ② Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. ② Read and write numbers from 1 to 20 in numerals and words.	<ul> <li>Read, write ar statements involuted and equals (=) s</li> <li>Represent and subtraction fact</li> <li>Add and subtraction fact outputs</li> <li>Solve one-stell and subtraction</li> </ul>	d use number bonds and related s within 20. Fact one-digit and two-digit including 0. To problems that involve addition , using concrete objects and entations, and missing number	Sufficient evidence shows the ab Solve one-step problems involve multiplication and division, by cases answer using concrete objects, perpresentations and arrays with the teacher.	ring <mark>Iculating</mark> the ictorial	Sufficient evidence shows the ability to:  Recognise, find and name a half as 1 of 2 parts of an object, shape or quantity.  Recognise, find and name a quarter as 1 c equal parts of an object, shape or quantity.	
		Geometry a	nd Measures			
Measures		Geometry – Pro	perties of Shapes		Geometry – Position and Movement	
Sufficient evidence shows the ability to:  ② Compare, describe and solve practical problems ② lengths and heights [for example, long/short, lotall/short, double/half] ③ mass/weight [for example, heavy/light, heavier than] ② capacity and volume [for example, full/empty, notation than, half, half full, quarter] ② time [for example, dearlier, later] ② Measure and begin to record the following: ② lengths and heights ② mass/weight ③ capacity and volume ② time (hours, minutes, seconds) ② recognise and know the value of different deno coins and notes ② sequence events in chronological order using la	nger/shorter, than, lighter nore than, less juicker, slower,	Sufficient evidence shows the ab  Recognise and name common  2 2-D shapes [for example, rectar and triangles]  3-D shapes [for example, cuboi and spheres].	2-D and 3-D shapes, including: ngles (including squares), circles	② Describe pos	ence shows the ability to: sition, direction and movement, including whole, and three-quarter turns.	

Key Vocabulary

example, before and after, next, first, today, yesterday, tomorrow,

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

morning, afternoon and evening].

hands on a clock face to show these times.





Maths – Progression of Knowledge, Skills and Understanding – Year 2					
	Number and Place Value				
Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions		
Sufficient evidence shows the ability to:  ② Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward ② Recognise the place value of each digit in a two-digit number (tens, ones). ② Identify, represent and estimate numbers using different representations, including the number line. ② Compare and order numbers from 0 up to 100; use <, > and = signs. ② Read and write numbers to at least 100 in numerals and in words. ② Use place value and number facts to solve problems.	Sufficient evidence shows the ability to  Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods. Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers. Add three one-digit numbers. Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Sufficient evidence shows the ability to:  Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.  Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.  Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.  Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	Sufficient evidence shows the ability to:  Recognise, find, name and write fractions 1/2, 1/3, 1/4, 2/4, 3/4 of a length, shape, set of objects or quantity.  Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and ½.		
	Geometry a	nd Measures			
Measures	Geometry – Properties of Shapes	Geometry – Position and Movement	Statistics		
Sufficient evidence shows the ability to:  ② 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. ② Compare and order lengths, mass, volume/capacity and record the results using >, < and =. ② Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value ② Find different combinations of coins that equal the same amounts of money.	Sufficient evidence shows the ability to:  Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. 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 and 3-D shapes and everyday objects.	Sufficient evidence shows the ability to:  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).	Sufficient evidence shows the ability to:  Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.  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.		

Solve simple problems in a practical context		
involving addition and subtraction of money of		
the same unit, including giving <mark>change.</mark>		
② 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 <mark>hours</mark> in a <mark>day.</mark>		Key Vocasbulary





Maths – Progression of Knowledge, Skills and Understanding – Year 3						
	Number and Place Value					
Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions			
Sufficient evidence shows the ability to:  ② Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. ② Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). ② Compare and order numbers up to 1000. ② Identify, represent and estimate numbers using different representations. ② Read and write numbers up to 1000 in numerals and in words. ② Solve number problems and practical problems involving these ideas.	Sufficient evidence shows the ability to  Add and subtract numbers mentally, including: 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.  Estimate the answer to a calculation and use inverse operations to check answers.  Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	Sufficient evidence shows the ability to:  Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. 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. 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.	Sufficient evidence shows the ability to:  ② 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. ② Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. ② Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. ② Recognise and show, using diagrams, equivalent fractions with small denominator. ② Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7]. ② Compare and order unit fractions, and fractions with the same denominators. ② Solve problems that involve all of the above.			
	Geometry a	nd Measures				
Measures	Geometry – Properties of Shapes	Geometry – Position and Movement	Statistics			
<ul> <li>☑ Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).</li> <li>☑ Measure the perimeter of simple 2-D shapes.</li> <li>☑ Add and subtract amounts of money to give change, using both £ and p in practical contexts.</li> <li>☑ Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.</li> <li>☑ 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.</li> <li>☑ Know the number of seconds in a minute and the number of days in each month, year and leap year.</li> </ul>	Sufficient evidence shows the ability to:  ② Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. ② Recognise angles as a property of shape or a description of a turn. ② 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. ② Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	Sufficient evidence shows the ability to:  ② 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).	Sufficient evidence shows the ability to:  Interpret and present data using bar charts, pictograms and tables solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'].  Use information presented in scaled bar charts and pictograms and tables.  Key Vocabulary			

② Compare durations of events [for example to		
calculate the time taken by particular events or		
tasks].		





Maths – Progression of Knowledge, Skills and Understanding – Year 4					
	Number and Place Value				
Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions		
Sufficient evidence shows the ability to:  ② Count in multiples of 6, 7, 9, 25 and 1000 find 1000 more or less than a given number. ② Count backwards through zero to include negative numbers. ② Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). ② Order and compare numbers beyond 1000. ② Identify, represent and estimate numbers using different representations. ② Round any number to the nearest 10, 100 or 1000. ② Solve number and practical problems that involve all of the above and with increasingly large positive numbers. ② 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.	Sufficient evidence shows the ability to  Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.  Estimate and use inverse operations to check answers to a calculation.  Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Sufficient evidence shows the ability to:  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.  Multiply two-digit and three-digit numbers by a one-digit number using formal written layout.  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.	Sufficient evidence shows the ability to:  Recognise and show, using diagrams, families of common equivalent fractions count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. 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. Add and subtract fractions with the same denominator. Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to 1/4, 1/2, %. 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. 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. Solve simple measure and money problems involving fractions and decimals to two decimal places.		
	<u> </u>	nd Measures			
Measures	Geometry – Properties of Shapes	Geometry – Position and Movement	Statistics		
Sufficient evidence shows the ability to:  Convert between different units of measure [for example, kilometre to metre; hour to minute].  Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.  Find the area of rectilinear shapes by counting squares.  Estimate, compare and calculate different measures, including money in pounds and pence.	Sufficient evidence shows the ability to:  Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.  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.	<ul> <li>Describe positions on a 2-D grid as coordinates in the first quadrant.</li> <li>Describe movements between positions as translations of a given unit to the left/right and up/down.</li> <li>Plot specified points and draw sides to complete a given polygon.</li> </ul>	Sufficient evidence shows the ability to:  Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.  Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.		

2 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.		Key Vocabulary





Maths – Progression of Knowledge, Skills and Understanding – Year 5						
	Number and Place Value					
Number and Place Value	Addition and Subtraction	Multiplication and Division	Frac	tions		
Sufficient evidence shows the ability to:  Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit 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.  Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. Solve number problems and practical problems that involve all of the above. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	Sufficient evidence shows the ability to:  Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).  Add and subtract numbers mentally with increasingly large numbers.  Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.  Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Sufficient evidence shows the ability to:  ② Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. ② Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers. ② Establish whether a number up to 100 is prime & recall prime numbers up to 19. ② 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. ② Multiply and divide numbers mentally drawing upon known facts. ② 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 ② Multiply and divide whole numbers and those involving decimals by 10, 100 &1000. ② Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3). ② Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. ② Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. ② Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.  Geometry and Measures	Sufficient evidence shows the abandary Compare and order fractions was multiples of the same number.  Ildentify, name and write equivalence fraction, represented visually, in the Recognise mixed numbers and from one form to the other & with as a mixed number [2/5 + 4/5 = 12]. Add and subtract fractions with denominators that are multiples. If Multiply proper fractions and mumbers, supported by material to Read and write decimal numbers. If Read and write decimal numbers. If Recognise and use thousandth hundredths and decimal equivaled. If Round decimals with two decimal places. If Read, write, order & compare decimal places. If Solve problems involving numbers. If Recognise the percent symbol percent relates to 'number of papercentages' as a fraction with decimal sylvalents of 1/2, 1/4, 1/5, 2/5 denominator of a multiple of 10	alent fractions of a given cluding tenths and hundredths. improper fractions and convert rite mathematical statements > 6/5 = 1 1/5 ]. In the same denominator and of the same number. Imixed numbers by whole is and diagrams. It is as fractions for example, is and relate them to tenths, it is and relate them to tenths, it is and places to the nearest whole is and mumbers with up to three in the three in three in the three in three in the three i		
Man		•	Coordon, Docition and	Chabiation		
	sures	Geometry – Properties of Shapes	Geometry – Position and Movement	Statistics		
<ul> <li>Convert between different units of kilometre and metre; centimetre are millimetre; gram and kilogram; litre</li> <li>Understand and use approximate units and common imperial units su</li> </ul>	Sufficient evidence shows the ability to:  Convert between different units of metric measure (for example, ometre and metre; centimetre and llimetre; gram and kilogram; litre & millilitre).  Understand and use approximate equivalences between metric its and common imperial units such as inches, pounds and pints.  Weasure and calculate the perimeter of composite rectilinear appes in centimetres and metres.  Sufficient evidence shows the ability to:  I Identify 3-D shapes, including cubes and other cuboids, from ability to:  I Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.  I Draw given angles, and measure them in degrees (°).  I Identify: angles at a point on a straight line & 1/2 a turn (total 360°) and know that the shape has not interpret		Sufficient evidence shows the ability to:  Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables, including timetables.			

② Calculate and compare the area of rectangles (including squares),	Use the properties of rectangles to deduce related facts and	
and including using standard units, square centimetres (cm2) and	find missing lengths and angles distinguish between regular and	
square metres (m2) and estimate the area of irregular shapes.	irregular polygons based on reasoning about equal sides and	
Estimate volume [for example, using 1 cm3 blocks to build cuboids	angles.	
(including cubes)] and capacity [for example, using water].		
Solve problems involving converting between units of time.		
Use all four operations to solve problems involving measure [for		
example, length, mass, volume, money] using decimal notation,		
including <mark>scaling.</mark>		Key Vocabulary

## **St John's Church of England Academy**



Number and Place Value					
Number and Place Value	Addition and Subtraction, Multiplication and Division	Fractions	Ratio and Proportion	Algebra	
Sufficient evidence shows the ability to:  Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.  Round any whole number to a required degree of accuracy.  Use negative numbers in context, and calculate intervals across zero.  Solve number and practical problems that involve all of the above.	Sufficient evidence shows the ability to:  Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.  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.  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.  Perform mental calculations, including with mixed operations and large numbers. Identify common factors, common multiples and prime numbers. Use their knowledge of the order of operations to carry out calculations involving the four operations. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	Sufficient evidence shows the ability to:  ② Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.  ② Compare and order fractions, including fractions > 1.  ③ Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.  ③ Multiply simple pairs of proper fractions, writing the answer in its simplest form. [For example, 1/2 × 1/2 = 1/8].  ⑤ Divide proper fractions by whole numbers. 1/3 ÷ 2 = 1/6  ② Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [e.g. 3/8].  ③ Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.  ③ Multiply one-digit numbers with up to two decimal places by whole numbers.  ③ Use written division methods in cases where the answer has up to two decimal places.  ③ Solve problems which require answers to be rounded to specified degrees of accuracy.  ③ Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	Sufficient evidence shows the ability to:  Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.  Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison.  Solve problems involving similar shapes where the scale factor is known or can be found.  Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	Sufficient evidence shows the ability to:  ② Use simple formulae. ② Generate and describe linear number sequences. ② Express missing number problems algebraically. ② Find pairs of numbers that satisfy an equation with twunknowns. ② Enumerate possibilities of combinations of two variables.	

	Geometry and Measures		
Measures	Geometry – Properties of Shapes	Geometry – Position and	Statistics
		Movement	
Sufficient evidence shows the ability to:	Sufficient evidence shows the ability to:	Sufficient evidence shows	Sufficient evidence
☑ Solve problems involving the calculation and conversion of units of measure, using	Draw 2-D shapes using given dimensions and angles.	the ability to:	shows the ability to:
decimal notation up to three decimal places where appropriate.	Recognise, describe and build simple 3-D shapes, including	② Describe positions on the	Interpret and
Use, read, write and convert between standard units, converting measurements	making <mark>nets</mark> .	full <mark>coordinate</mark> grid (all four	construct pie charts
of length, mass, volume and time from a smaller unit of measure to a larger unit,	Compare and classify geometric shapes based on their	quadrants).	and <mark>line graphs</mark> and
and vice versa, using decimal notation to up to three decimal places.	properties and sizes and find unknown angles in any triangles,	② Draw and translate simple	use these to solve
Convert between miles and kilometres.	quadrilaterals, and regular polygons.	shapes on the coordinate	problems.
☑ Recognise that shapes with the same areas can have different perimeters and vice	Illustrate and name parts of circles, including radius,	plane, and reflect them in	② Calculate and
versa.	diameter and circumference and know that the diameter is	the <mark>axes.</mark>	interpret the mean as
Recognise when it is possible to use formulae for area and volume of shapes.	twice the radius recognise angles where they meet at a point,		an <mark>average.</mark>
Calculate the area of parallelograms and triangles.	are on a straight line, or are vertically opposite, and find		
Calculate, estimate and compare volume of cubes and cuboids using standard	missing angles.		
units, including cubic centimetres (cm3) and cubic metres (m3), and extending to			
other units [for example, mm3 and km3 ].			
			Key Vocabulary