Over St. John's CE Primary School

'Let your light shine before others.' Matthew 5:16

Progression of Knowledge and Skills in Mathematics

Skill focus NCETM Mastering Number and ELGs	**Reception**	**Skill focus**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Subitising	Perceptually subitise within 3 Identify sub-groups in larger arrangements Create their own patterns for numbers within 4 Practise using their fingers to represent quantities which they can subitise Experience subitising in a range of contexts, including temporal patterns made by sounds. Subitise within 5, perceptually and conceptually, depending on the arrangements. Increase confidence in subitising by continuing to explore patterns within 5, including structured and random arrangements Explore a range of patterns made by some numbers greater than 5, including structured patterns in which 5 is a clear part Experience patterns which show a small group and '1 more' Continue to match arrangements to finger patterns. Explore symmetrical patterns, in which is side is a familiar pattern, linking this to doubles. Continue to practise increasingly familiar subitising arrangements, including those which expose '1 more' or 'doubles' patterns. Use subitising skills to enable them to identify when patterns show the same number but in a different arrangement, or when patterns are similar but have a different number.	**Number and Place Value**	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens Given a number, identify one more and one less 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 Read and write numbers from 1 to 20 in numerals and words.	Count in in tens from any number, forward and backward Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs Read and write numbers to at least 100 in numerals and in words Use place value and number facts to solve problems.	Count from 0 in multiples of 50 and 100; find 10 or 100 more or less than a given number (NB – counting in multiples of 4 and 8 have been moved to multiplication unit) Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Compare and order numbers up to 1000 Identify, represent and estimate numbers using different representations Read and write numbers up to 1000 in numerals and in words Solve number problems and practical problems involving these ideas.	Count in multiples of 6, 7, 9, 25 and 1000 Find 1000 more or less than a given number Count backwards through zero to include negative numbers Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) Order and compare numbers beyond 1000 Identify, represent and estimate numbers using different representations Round any number to the nearest 10, 100 or 1000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers 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.	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.	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.

	Subitise structured and unstructured patterns, including those which show numbers within 10, in relation to 5 and 10 Be encouraged to identify when it is appropriate to count and when groups can be subitised.							
	Vocabulary							
	count subitise order/ordinal compare		sort represent multiples partitioning ones tens	count in steps count in multiples place value estimate compare	ascending descending 10 or 100 more 10 or 100 less hundreds	negative numbers roman numerals 1000 more 1000 less thousands round	ten thousands one hundred thousands powers of integer	millions ten millions
Cardinality, ordinality and counting	Relate the counting sequence to cardinality, seeing that the last number spoken gives the number in the entire set Have a wide range of opportunities to develop their knowledge of the counting sequence, including through rhyme and song Have a wide range of opportunities to develop 1:1 correspondence, including by coordinating movement and counting Have opportunities to develop an understanding that anything can be counted, including actions and sounds Explore a range of strategies which support accurate counting. Continue to develop their counting skills Explore the cardinality of 5, linking this to dice patterns and 5 fingers on 1 hand Begin to count beyond 5 Begin to recognise numerals, relating these to quantities they can subitise and count. Continue to develop verbal counting to 20 and beyond Counting to develop object counting skills, using a range of strategies to develop accuracy Continue to link counting to cardinality, including using their fingers to represent quantities between 5 and 10 Order numbers, linking cardinal and ordinal representations of number. Continue to consolidate their understanding of cardinality, working with larger numbers within 10	**Addition and Subtraction**	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs Represent and use number bonds and related subtraction facts within 20 Add and subtract one-digit and two-digit numbers to 20, including zero Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9.	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 • Adding 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. 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	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.	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.	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	Perform mental calculations, including with mixed operations and large 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 Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

	Become more familiar with the counting pattern beyond 20. Continue to develop verbal counting to 20 and beyond, including counting from different starting numbers. Continue to develop confidence and accuracy in both verbal and object counting.							
	Vocabulary							
	forwards backwards numerals digit one more one less equal to more than less than (fewer)			addition/add subtraction difference equals facts problems missing number problems 2-digit number inverse	sum 3-digit number commutative	column addition column subtraction exchange estimate	4-digit number operations methods	
Composition	See that all numbers can be made of 1s Compose their own collections within 4. Explore the concept of 'wholes' and 'parts' by looking at a range of objects that are composed of parts, some of which can be taken apart and some of which cannot Explore the composition of numbers within 5. Continue to explore the composition of 5 and practise recalling 'missing' or 'hidden' parts for 5. Explore the composition of 6, linking this to familiar patterns, including symmetrical patterns Begin to see that numbers within 10 can be composed of '5 and a bit'. Explore the composition of odd and even numbers, looking at the 'shape' of these numbers. Begin to link even numbers to doubles Begin to explore the composition of numbers within 10. Explore the composition of 10.	**Multiplication & Division**	Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward 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	Count from 0 in multiples of 4, 8 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.	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.	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 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 Multiply and divide numbers mentally drawing upon known facts 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 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	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 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

							Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple ratio.	Solve problems involving addition, subtraction, multiplication and division Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
	Vocabulary							
	add plus altogether total take away /minus number bonds part whole digit double half twice as many equal unequal share group odd even		multiplication division arrays	multiplication tables commutative repeated addition	exchange mathematical statements missing number problems integer scaling problems correspondence problems derived facts	factor pairs formal written layout distributive law remainders	multiples factors prime numbers square numbers cube numbers short division product dividend divisor quotient operations	multi-digit numbers long division

Comparison	Understand that sets can be compared according to a range of attributes, including by their numerosity. Use the language of comparison, including 'more than' and 'fewer than'. Compare sets 'just by looking'. Compare sets using a variety of strategies, including 'just by looking', subitising and matching. Compare sets by matching, seeing that when every object in a set can be matched to one in the other set, they contain the same number and are equal amounts. Continue to compare sets using the language of comparison, and play games which involve comparing sets. Continue to compare sets by matching, identifying when sets are equal Explore ways of making unequal sets equal. Compare numbers, reasoning which is more, using both an understanding of the 'howmanyness' of a number and its position in the number system. Order sets of objects, linking this to their understanding of the ordinal number system.	**Fractions (decimals and percentages)**	Recognise, find and name a half as one of two equal parts of an object, shape or quantity Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.	Recognise, find, name and write fractions 1/3,1/4,2/4,3/4 of a length, shape, set of objects or quantity Write simple fractions for example, ½ of 6 = 3 Recognise the equivalence of 2/4 and 1/2	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 Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Recognise and show, using diagrams, equivalent fractions with small denominators Add and subtract fractions with the same denominator within one whole Compare and order unit fractions, and fractions with the same denominators Solve problems that involve all of the above.	Recognise and show, using diagrams, families of common equivalent fractions 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 Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Recognise and write decimal equivalents of any number of tenths or hundredths Recognise and write decimal equivalents to ¼, ½ and ¾ 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	Compare and order fractions whose denominators are all multiples of the same number Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number Add and subtract fractions with the same denominator and denominators that are multiples of the same number Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Read and write decimal numbers as fractions Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Round decimals with two decimal places to the nearest whole number and to one decimal place Read, write, order and compare numbers with up to three decimal places	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Compare and order fractions, including fractions > 1 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Multiply simple pairs of proper fractions, writing the answer in its simplest form Divide proper fractions by whole numbers Associate a fraction with division and calculate decimal fraction equivalents 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 Multiply one-digit numbers with up to two decimal places by whole numbers Use written division methods in cases where the answer has up to two decimal places Solve problems which require answers to be rounded to specified degrees of accuracy

						Solve simple measure and money problems involving fractions and decimals to two decimal places.	Solve problems involving number up to three decimal places Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal Solve problems which require knowing percentage and decimal equivalents of 1/2,1/4,1/5,2/5, and 4/5 and those fractions with a denominator of a multiple of 10 or 25.	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
	Vocabulary							
	equal unequal share compare more than less (fewer) than		whole half quarter equal parts	three quarters third equivalent fractions unit fractions non unit fractions numerator denominator one whole	tenths	decimal equivalence hundredths proper fractions improper fractions decimal point integer factor convert	fifth thousandths mixed numbers per cent % complement	
Shape	Select, rotate and manipulate shapes to develop spatial reasoning skills. Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Continue, copy and create repeating patterns.	**Geometry – Properties of Shape**	Recognise and name common 2-D and 3-D shapes, including: • 2-D shapes [for example, rectangles (including squares), circles and triangles] • 3-D shapes [for example, cuboids (including cubes), pyramids and spheres].	Identify and describe the properties of 2-D shapes, including the number of sides and lines 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]	Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them Recognise angles as a property of shape or a description of a turn 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	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	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees (°) Identify:	Draw 2-D shapes using given dimensions and angles Recognise, describe and build simple 3-D shapes, including making nets 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,

				Compare and sort common 2-D and 3-D shapes and everyday objects.	whether angles are greater than or less than a right angle Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	respect to a specific line of symmetry	• angles at a point and one whole turn (total 360°) • angles at a point on a straight line and ½ a turn (total 180°) • other multiples of 90° Use the properties of rectangles to deduce related facts and find missing lengths and angles Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.	diameter and circumference and know that the diameter is twice the radius Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
	Vocabulary							
	2-d shapes rectangle square circle triangle characteristics 3-d shapes cuboids cubes cone spheres curved straight flat		sides corners properties pyramids faces	pentagon hexagon line of symmetry properties cylinder edges vertices vertex	right-angle triangle heptagon octagon polygon properties prism orientations angles acute angle obtuse angle turn right angles half turn three quarters of a turn greater than right angle less than right angle horizontal lines vertical lines perpendicular lines parallel lines	isosceles equilateral scalene trapezium rhombus parallelogram kite geometric shapes quadrilaterals	regular polygon irregular polygon reflex angles degrees one whole turn angles on straight line angles around a point vertically opposite missing angles	radius diameter circumference dimensions
		Geometry – Position and Direction	Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	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 anti-clockwise).	Re-cap Y2 objectives where appropriate	Describe positions on a 2-D grid as coordinates in the first quadrant Describe movements between positions as translations of a given unit to the left/right and up/down Plot specified points and draw sides to complete a given polygon	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.	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.
		Vocabulary						
			position direction	clockwise/anti-clockwise		co-ordinates first quadrant	reflection	four quadrants co-ordinate plane

			movement whole turn quarter turn half turn three-quarter turn	straight line rotation arrange sequences		grid translation plot polygon axis		
Measure	Compare length, weight and capacity.	**Measure**	Compare, describe and solve practical problems for: • lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] • mass/weight [for example, heavy/light, heavier than, lighter than] • capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] Measure and begin to record the following: • lengths and heights • mass/weight • capacity and volume Recognise and know the value of different denominations of coins and notes Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] 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 hands on a clock face to show these times. Measure and begin to record the following: • time (hours, minutes, seconds) Compare, describe and solve practical problems for: time [for example, quicker, slower, earlier, later]	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 Compare and order, mass, volume/capacity and record the results using >, < and = Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 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 hours in a day	Add and subtract amounts of money to give change, using both £ and p in practical contexts Measure, compare, add and subtract: lengths (m/cm/mm) Measure the perimeter of simple 2-D shapes Measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml) Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks 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 Know the number of seconds in a minute and the number of days in each month, year and leap year Compare durations of events [for example to calculate the time taken by particular events or tasks].	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 Convert between different units of measure [for example, kilometre to metre; hour to minute] 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	Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres 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 Solve problems involving converting between units of time	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate 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 to up to three decimal places Convert between miles and kilometres Recognise that shapes with the same areas can have different perimeters and vice versa Recognise when it is possible to use formulae for area and volume of shapes Calculate the area of parallelograms and triangles
		Vocabulary						
	measure wide(er)		compare mass	standard units estimate	millimetre mm perimeter	kilometres km rectilinear figure	decimal notation scaling	conversion miles

	narrow(er) compare long(er)(est) short(er)(est) length height long(er)/short(er) tall(er)/short(er) weight capacity heavy/light heavier than lighter than big/bigger/biggest full/empty more than less than half/half full		volume chronological order days of the week months of the year month year o'clock half past second money coins notes pounds £ pence p	order record results centimetre cm metre m kilogram kg gram g quarter full three quarters full litres l millilitres ml temperature Celsius intervals of time quarter past/to duration value change	analogue clock roman numerals 12-hour clock 24-hour clock a.m./p.m. noon midnight leap year digital	area convert	metric units imperial units inches compound shape irregular shapes square centimetres square metres cubic centimetre pounds pints	formulae parallelograms triangles feet cubic metre cubic millimetre cubic kilometre gallons stones ounces
		Statistics		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.	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?'] using information presented in scaled bar charts and pictograms and tables	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.	Solve comparison, sum and difference problems using information presented in a line graph Complete, read and interpret information in tables, including timetables	Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average.
		Vocabulary						
				pictograms tally chart block diagram category sorting totalling comparing horizontal vertical	table bar chart one-step problem two-step problem	time graph discrete data continuous data line graph comparison problem sum difference problem calculate interpret	timetable two-way tables	pie chart mean
		Ratio and Proportion						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. **Vocabulary** relative size missing values integer multiplication percentages scale factor unequal sharing & grouping
		Algebra						Use simple formulae Generate and describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables **Vocabulary** formulae linear number sequences algebraically equation unknowns combinations variables