Maths Curriculum Progression Map

THE FREE SCHOOL NORWICH

This progression map details the skills and knowledge that children at The Free School Norwich will gain at each stage of the curriculum.

Place Value							
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Greater Depth**
Recite numbers in order to 10. Realise not only objects, but anything can be counted including steps, claps or jumps. Count up to three or four objects by saying one number name for each item. Count out up to six objects from a larger group. Count actions or objects which cannot be moved.	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count numbers to 100 in numerals; count in multiples of twos, fives and tens. Identify and represent numbers using objects and pictorial representations. Read and write numbers to 100 in numerals . Read and write numbers from 1 to	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. Read and write numbers to at least 100 in numerals and in words . Identify, represent and estimate numbers using different representations, including the number line. Recognise the place value of each digit in a two-digit number (tens, ones).	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. Identify, represent and estimate numbers using different representations. Read and write numbers up to 1000 in numerals and in words. Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).	Count in multiples of 6, 7, 9, 25 and 1000 . Count backwards through zero to include negative numbers. Identify, represent and estimate numbers using different representations. 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.	Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Count forwards and backwards with positive and negative whole numbers, including through zero. Read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit. Read Roman numerals to 1000	Read and write numbers up to 10 000 000 and determine the value of each digit. 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.	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.

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Count objects to 10 and beginning to count beyond 10. Count an irregular arrangement of up to ten objects. Estimate how many objects they can see and check by counting them. Count reliably with numbers from one to 20. Show curiosity about numbers by offering comments or asking questions. Show an interest in number problems. Begin to identify own	20 in numerals and words. Given a number, identify one more and one less.	Compare and order numbers from 0 up to 100; use and = signs. Use place value and number facts to solve problems.	Compare and order numbers up to 1000. Solve number problems and practical problems involving these ideas.	Find 1000 more or less than a given number. Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). Order and compare numbers beyond 1000. 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.	(M) and recognise years written in Roman numerals. Order and compare numbers to at least 1 000 000 and determine the value of each digit. Interpret negative numbers in context. 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.	Solve number and practical problems that involve all of the above.	

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mathematical problems based on own interest and fascination. Say the number that is one more than a given number. Find one more or one less from a group of up to five objects, then ten objects. Say which number is one more or one less than a given number from one to 20. Compare two groups of objects, saying when they have the same number. Use the language of 'more' and 'fewer' to							

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compare two sets of objects. Place numbers one to 20 in order.							

Addition and Subtraction							
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Greater Depth**
Begin to use the vocabulary involved in adding and subtracting in practical activities and discussion. Find the total of items in two groups by counting all of them Add and subtract two single-digit numbers and count on and back to find the answer using	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 = c – 9.	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. Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers,	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. Solve problems, including missing number problems, using number facts, place value, and more complex	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. 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. Solve addition and subtraction multistep 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 multistep problems in contexts, deciding which operations	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. Solve problems involving addition, subtraction, multiplication and division. Use estimation to check answers to

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quantities and objects. Say which number is one more or one less than a given number from one to 20.		quantities and measures; applying their increasing knowledge of mental and written methods.	addition and subtraction.		Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	and methods to use and why.	calculations and determine, in the context of a problem, an appropriate degree of accuracy.

Multiplication and Division							
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Greater Depth**
Solve problems, including doubling, halving and sharing.	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.	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. Show that multiplication of two numbers can be done in any order (commutative) and division of one	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	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	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 (nonprime) numbers.	Identify common factors, common multiples and prime numbers. Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Multiply multi-digit numbers up	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,

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		number by another cannot. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.	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.	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.	Establish whether a number up to 100 is prime and recall prime numbers up to 19. Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) 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.	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	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.

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					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. Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes . Solve problems involving multiplication and division,	according to the context. Perform mental calculations, including with mixed operations and large numbers. Solve problems involving addition, subtraction, multiplication and division. Use their knowledge of the order of operations to carry out calculations involving the four operations.	

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					including scaling by simple fractions and problems involving simple rates. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.		

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Fractions, Decimals and Percentages							
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Greater Depth**
	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, ¼, 2/4 and ¾ of a length, shape, set of objects or quantity. Recognise the equivalence of 2/4 and ½. Write simple fractions for example, 1/2 of 6 = 3.	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 use fractions as numbers: unit fractions and non-unit fractions with small denominators. Recognise and show, using diagrams, equivalent fractions	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Recognise and show, using diagrams, families of common equivalent fractions. Add and subtract fractions with the same denominator. 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. Recognise and write decimal equivalents	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 [for example, 2/5 + 4/5 = 6/5 = 1 1/5]. Compare and order fractions whose denominators are all multiples of the same number.	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.	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.

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			with small denominators. Compare and order unit fractions, and fractions with the same denominators. Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7= 6/7]. Solve problems that involve all of the above.	of any number of tenths or hundredths. Recognise and write decimal equivalents to ¼, ½, ¾. 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.	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 [for example, 0.71 = 71/100]. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	Divide proper fractions by whole numbers. Identify the value of each digit in numbers given to three decimal places. Associate a fraction with division and calculate decimal fraction equivalents. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	Divide proper fractions by whole numbers. Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction. 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.

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					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. 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 and those fractions		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. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

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					with a denominator of a multiple of 10 or 25.		

Ratio, Proportion and Algebra							
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Greater Depth**
	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = c – 9.	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	Solve problems, including missing number problems.			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/use of percentages for comparison. Solve problems involving similar shapes where the scale factor is known or can be found.	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 12% of 360] and the use of percentages for comparison. Solve problems involving similar shapes where the

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						Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. Use simple formulae to 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.	scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. Generate and describe linear number sequences by writing equation for the nth term. Express missing number problems algebraically. Explain how to find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables

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Measurement, Area, Perimeter and Time							
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Greater Depth**
Order two or three items by length or height. Order two items by weight or capacity. Use everyday languages to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and solve problems	Compare, describe and solve practical problems for: lengths and heights; mass/weight; capacity and volume; time. Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; time (hours, minutes, seconds). 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].	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 lengths, mass, volume/capacity and record the results using >, < and =.	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). Add and subtract amounts of money to give change, using both £ and p in practical contexts. 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.	Convert between different units of measure [for example, kilometre to metre; hour to minute]. Estimate, compare and calculate different measures, including money in pounds and pence. 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. Measure and calculate the	Convert between different units of metric measure. 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. Solve problems involving converting	Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 d.p. 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 3 d.p. Convert between miles and kilometres.	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.

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Begin to use everyday language related to money. Use everyday language related to time. Order and sequence familiar events. Measure short periods of time in simple ways.	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.	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.	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]. Measure the perimeter of simple 2-D shapes.	perimeter of a rectilinear figure (including squares) in centimetres and metres. Find the area of rectilinear shapes by counting squares.	between units of time. 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. Estimate volume [for example, using blocks to build cuboids] and capacity [for example, using water].	Use all four operations to solve problems involving measure [for example, money]. Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa. 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.	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. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units [for

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		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.				Calculate the area of parallelograms and triangles. Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units.	example, mm3 and km3].

Geometry							
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Greater Depth**
Show an interest in shape and space by playing with shapes or making arrangements with objects.	Recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles]. Recognise and name common 3-D	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.	Draw 2-D shapes. Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2-D	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Use the properties of rectangles to	Draw 2-D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes.	Draw accurately 2D shapes using given dimensions and angles. Recognise, describe and build 3D shapes, including making nets.

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Show interest in shape by sustained construction activity or by talking about shapes or arrangements. Show interest in shapes in the environment. Use shapes appropriately for tasks. Begin to talk about shapes in everyday objects, e.g. 'round' and 'tall'. To begin to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to	shapes [for example, cuboids (including cubes), pyramids and spheres]. Describe position, direction and movement, including whole, half, quarter and three-quarter turns.	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 shapes and everyday objects. Recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. Compare and sort common 3-D shapes and everyday objects.	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 whether angles are greater than or less than a right angle. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	shapes presented in different orientations. 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. 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	deduce related facts and find missing lengths and angles. 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: angles at a point and one whole turn (total 360°); angles at a point on a straight line and 1/2 a turn (total 180°); other multiples of 90°. Identify, describe and represent the	Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. Recognise, describe and build simple 3-D shapes, including making nets. Find unknown angles in any triangles, quadrilaterals, and regular polygons. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and know the angles in common polygons. Illustrate and name parts of circles, including radius, 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. Describe positions on the full coordinate

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describe shapes. Select a particular named shapes. Explore characteristics of everyday objects and shapes and use mathematical language to describe them. Use positional language. Describe their relative position such as 'behind' or 'next to'. Use familiar objects and common shapes to create and recreate		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)		left/right and up/down . Plot specified points and draw sides to complete a given polygon.	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.	grid (all four quadrants). Draw and translate simple shapes on the coordinate plane, and reflect them in the axes and about other vertical and horizontal lines.

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patterns and build models. Recognise, create and describe patterns							

Statistics							
EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Greater Depth**
To record, using marks that they can interpret and explain		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.	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.	Complete, read and interpret information in tables, including timetables. Solve comparison, sum and difference problems using information presented in a line graph.	Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average.	Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as an average.

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		Ask and answer questions about totalling and comparing categorical data.					

Key Vocabulary					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Sort, represent, multiples, partitioning, ones, tens, hundreds addition/ add, subtraction, difference, equals, facts, problems, missing number problems, 2-digit number, inverse multiplication, division, arrays Sides, corners, properties, pyramids, faces Whole, half, quarter, equal parts mass, volume Position, direction, movement, whole turn, quarter	Count in steps, count in multiples, place value, estimate, compare, sum, three-digit number, commutative value, change, multiplication tables, commutative, repeated addition, three quarters, third, equivalent fractions, unit fractions, non-unit fractions, numerator, denominator, one whole, pictograms, tally chart, block diagram, category, sorting, totalling, comparing, horizontal, vertical, pentagon, hexagon,	Ascending, descending, 10 or 100 more, 10 or 100 less, hundreds Column addition, column subtraction, exchange, estimate mathematical statements, missing number problems, integer scaling problems, correspondence problems, derived facts, tenths, hours, minutes, seconds, duration, millimetre (mm), perimeter kilogram, gram, mass, volume, millilitres, litres, capacity, pounds,	Negative numbers, Roman numerals, 1000 more, 1000 less, thousands, round, 4-digit number, operations, methods, factor pairs, formal written layout, distributive law, remainders, decimal equivalence, hundredths, convert, proper fractions, improper fractions, decimal point, isosceles, equilateral, scalene, trapezium, rhombus, parallelogram, kite, geometric shapes, quadrilaterals, 4-digit number, operations,	Ten thousand, one hundred thousand, powers of, integer, multiples, factors, prime numbers, square numbers, cube numbers, short division, product, dividend, divisor, quotient, operations, fifth, thousandths, mixed numbers, integer, complements , regular polygon, irregular polygon, reflex angles, degrees, angles on a straight line, angles round a point, vertically opposite, missing angles, negative number, inverse operations, multi-step operations, decimal notation, scaling, metric units, imperial units, inches, compound shape, irregular	Millions, ten million, relative size, missing values, integer multiplication, percentages, scale factor, unequal sharing and grouping, radius, diameter, circumference, dimensions, multi-digit numbers, long division, formulae, linear number sequences, algebraically, equation, unknowns, combinations, variables, cubic metre, cubic millimetre, cubic kilometre, gallons, stones, ounces, four quadrants, co-ordinate plane, conversion, miles, formulae, feet, pie chart, mean All previous vocabulary recapped and extended

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turn, half turn, three-quarter turn money, coins, notes, pounds, pence, chronological order, days of the week, months of the year, month, year, o'clock, half past, second	line of symmetry, properties, cylinder, edges, vertices, vertex, standard units, estimate, order, record results, centimetre (cm), metre (m) Intervals of time, quarter to/past, duration, clockwise/ anti-clockwise, straight line, rotation, arrange, sequences kilogram (kg), gram (g), quarter full, three quarters full, litres (l), millilitres (ml), temperature, Celsius	pence, convert, change, right-angle triangle, heptagon, octagon, polygon, properties, prism, orientations, angles, acute, obtuse, horizontal, vertical, perpendicular, parallel, analogue clock, Roman numerals, 12 hour clock, 24 hour clock, am/pm, noon, midnight, leap year, digital, table, bar chart, one-step problem, two-step problem	methods, area, square, kilometres, rectilinear figure, a estimate, time graph, discrete data, continuous data, line graph, comparison problem, sum problem, difference problem, calculate, interpret, factor pairs, formal written layout, distributive law, remainders, co-ordinates, first quadrant, grid, translation, plot, polygon, axis	shapes, square centimetres, square metres, reflection, cubic centimetre, pounds, pints, timetable, two-way timetable, fifth, thousandths, mixed numbers, per cent, complements, cubic centimetres, pint	