

Mathematics Progression Map



Play, Learn and Grow Together!

		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Number and Place Value	<ul style="list-style-type: none"> I am developing fast recognition of up to 3 objects, without having to count them individually ('subitising'). I can recite numbers past 5. I can say one number for each item in order: 1,2,3,4,5. I know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). I can show 'finger numbers' up to 5. I can link numerals and amounts: e.g., showing the right number of objects to match the numeral, up to 5. I can experiment with my own symbols and marks as well as numerals. I can solve real world mathematical problems with numbers to 5. I can compare quantities using language: 'more than', 'fewer than'. 	<p>Number</p> <ul style="list-style-type: none"> I have a deep understanding of numbers to 10, including the composition of each number. I can subitise (recognise quantities without counting) up to 5. <p>Numerical Patterns</p> <ul style="list-style-type: none"> I can verbally count beyond 20, recognising the pattern of the counting system. 	<ul style="list-style-type: none"> I can count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number I can count, read and write numbers to 100 in numerals I count in multiples of twos, fives and tens When given a number, I identify one more and one less I use the language of: equal to, more than, less than (fewer), most, least I identify and represent numbers using objects and pictorial representations including the number line. I read and write numbers from 1 to 20 in numerals and words. 	<ul style="list-style-type: none"> I count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward I compare and order numbers from 0 up to 100; use <, > and = signs I identify, represent and estimate numbers using different representations, including the number line I read and write numbers to at least 100 in numerals and in words I recognise the place value of each digit in a two-digit number (tens, ones) I use place value and number facts to solve problems 	<ul style="list-style-type: none"> I count from 0 in multiples of 4, 8, 50 and 100 I find 10 or 100 more or less than a given number I compare and order numbers up to 1 000 I identify, represent and estimate numbers using different representations I read and write numbers up to 1 000 in numerals and in words I recognise the place value of each digit in a three-digit number (hundreds, tens, ones) I can solve number problems and practical problems involving these ideas. 	<ul style="list-style-type: none"> I count backwards through zero to include negative numbers I count in multiples of 6, 7, 9, 25 and 1 000 I find 1 000 more or less than a given number I order and compare numbers beyond 1 000 I compare numbers with the same number of decimal places up to two decimal places I 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. I recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) I round any number to the nearest 10, 100 or 1 000 I round decimals with one decimal place to the nearest whole number I solve problems that involve large positive numbers 	<ul style="list-style-type: none"> I interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero I count forwards or backwards in powers of 10 for any given number up to 1 000 000 I read, write, order and compare numbers to at least 1 000 000 I read Roman numerals to 1 000 (M) and recognise years written in Roman numerals. I read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit I round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000 I round decimals with two decimal places to the nearest whole number and to one decimal place I solve problems that involve large positive numbers 	<ul style="list-style-type: none"> I use negative numbers in context, and calculate intervals across zero I read, write, order and compare numbers up to 10 000 000 and determine the value of each digit I round any whole number to a required degree of accuracy I solve number and practical problems that involve all of the above.

Mathematics Progression Map



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		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Addition and Subtraction	<ul style="list-style-type: none"> I am developing fast recognition of up to 3 objects, without having to count them individually ('subitising'). I know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). I can solve real world mathematical problems with numbers to 5. 	<ul style="list-style-type: none"> I can automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. I can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. I can explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. 	<ul style="list-style-type: none"> I represent and use number bonds and related subtraction facts within 20. I add and subtract one-digit and two-digit numbers to 20, including zero I read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs I solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \quad - 9$ 	<ul style="list-style-type: none"> I recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. I add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers I can show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot I recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. I solve problems with addition and subtraction: <ul style="list-style-type: none"> * using concrete objects and pictorial representations, including those involving numbers, quantities and measures 	<ul style="list-style-type: none"> I add and subtract numbers mentally, including: <ul style="list-style-type: none"> * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds I can add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction I estimate the answer to a calculation and use inverse operations to check answers I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction 	<ul style="list-style-type: none"> I add and subtract numbers with up to 4 digits using the formal written methods of column addition and subtraction where appropriate I can estimate and use inverse operations to check answers to a calculation I can solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	<ul style="list-style-type: none"> I can add and subtract numbers mentally with increasingly large numbers I can add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction) I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 	<ul style="list-style-type: none"> I can perform mental calculations, including with mixed operations and large numbers I can use my knowledge of the order of operations to carry out calculations involving the four operations I can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why I can Solve problems involving addition, subtraction, multiplication and division

Mathematics Progression Map



		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Multiplication and Division	<ul style="list-style-type: none"> I am developing fast recognition of up to 3 objects, without having to count them I can solve real world mathematical problems with numbers to 5. 	<ul style="list-style-type: none"> I can explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. 	<ul style="list-style-type: none"> I can count in multiples of twos, fives and tens I can 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 	<ul style="list-style-type: none"> I can count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backwards I can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers I show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs I can solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts 	<ul style="list-style-type: none"> I can count from 0 in multiples of 4, 8, 50 and 100 I can recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables I can write and calculate mathematical statements for multiplication and division using the multiplication tables that I know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods I can solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems 	<ul style="list-style-type: none"> I can count in multiples of 6, 7, 9, 25 and 1 000 I can recall multiplication and division facts for multiplication tables up to 12×12 I can 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 I can multiply two-digit and three-digit numbers by a one-digit number using formal written layout I recognise and use factor pairs and commutativity in mental calculations I can solve problems involving multiplying and adding, including using the distributive law 	<ul style="list-style-type: none"> I can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 I can multiply and divide numbers mentally drawing upon known facts I multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 I 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 I divide numbers up to 4 digits by a one-digit number and interpret remainders appropriately for the context identify multiples and factors. I know whether a number up to 100 is prime and recall prime numbers up to 19 I recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) 	<ul style="list-style-type: none"> I can perform mental calculations, including with mixed operations and large numbers I associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$) I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal method I divide numbers up to 4-digits by a two-digit whole number using the formal method and where appropriate for the context divide numbers up to 4 digits by a two-digit whole number using the formal written method I can calculate, estimate and compare volume of cubes and cuboids using standard units, including centimeter cubed (cm^3) and cubic meters (m^3), and extending to other units such as mm^3 and km^3

Mathematics Progression Map



		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Fractions, Decimals and Percentages.			<ul style="list-style-type: none"> I can recognise, find and name a half as one of two equal parts of an object, shape or quantity I can recognise, find and name a quarter as one of four equal parts of an object, shape or quantity 	<ul style="list-style-type: none"> I can count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line I can recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2. 	<ul style="list-style-type: none"> I can count up and down in tenths I recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators I recognise that tenths arise from dividing an object into 10 equal parts and in dividing one – digit numbers or quantities by 10. I recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators I can compare and order unit fractions, and fractions with the same denominators I recognise and show, using diagrams, equivalent fractions with small denominators I add and subtract fractions with the same denominator within one whole 	<ul style="list-style-type: none"> I can count up and down in hundredths I recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten I can compare numbers with the same number of decimal places up to two decimal places I round decimals with one decimal place to the nearest whole number I recognise and show, using diagrams, families of common equivalent fractions I recognise and write decimal equivalents of any number of tenths or hundredths I recognise and write decimal equivalents to 1/4; 1/2; 3/4 I can add and subtract fractions with the same denominator I can find the effect of dividing a one- or two-digit number by 10 and 100 I can solve problems involving fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions 	<ul style="list-style-type: none"> I recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents I can compare and order fractions whose denominators are all multiples of the same number I can read, write, order and compare numbers with up to three decimal places I can round decimals with two decimal places to the nearest whole number/1 dp I can identify, name and write equivalent fractions I can read and write decimal numbers as fractions (e.g. 0.71 = 71/100) I recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents I recognise the per cent symbol (%) and understand that per cent relates to "number of parts per hundred" I can add and subtract fractions with the same I recognise mixed numbers and improper fractions and convert from one form to the other I can multiply proper fractions and mixed numbers by whole numbers. I can solve problems involving numbers up to three decimal places 	<ul style="list-style-type: none"> I can compare and order fractions, including fractions > 1 I can identify the value of each digit in numbers given to three decimal places I can solve problems which require answers to be rounded to specified degree of accuracy I use common factors to simplify fractions; use common multiples to express fractions in the same denomination associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) I can recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. I can add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions I can multiply simple pairs of proper fractions, writing the answer in its simplest form. I can multiply one-digit numbers with up to two decimal places by whole numbers I can divide proper fractions by whole numbers I can multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places I can identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 I associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) I use written division methods in cases where the answer has up to two decimal places I can solve problems involving numbers up to three decimal places and solve problems which require knowing percentage and decimal equivalents

Mathematics Progression Map



		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Ratio and Proportion.								
									<ul style="list-style-type: none"> • I can solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • I can solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • I can solve problems involving similar shapes where the scale factor is known or can be found • I can solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Mathematics Progression Map



Play, Learn and Grow Together!

		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Measurement	I can make comparisons between objects relating to size, length, weight and capacity.	I can compare length, weight and capacity.	<ul style="list-style-type: none"> I can compare, describe and solve practical problems for: lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] * time [e.g. quicker, slower, earlier, later] I can sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] I can measure and begin to record the following: <ul style="list-style-type: none"> * lengths and heights * mass/weight * capacity and volume * time (hours, minutes, seconds) I recognise and know the value of different denominations of coins and notes I can tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. I recognise and use language relating to dates, including days of the week, weeks, months and years 	<ul style="list-style-type: none"> I can choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (liters/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels I can recognise and use symbols for pounds (£) and pence (p); I can make a particular value and find different combinations of coins that equal the same amounts of money I can solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change I can 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. I know the number of minutes in an hour and the number of hours in a day. 	<ul style="list-style-type: none"> I compare durations of events and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Telling the Time) I add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) I can measure the perimeter of simple 2-D shapes I can add and subtract amounts of money to give change, using both £ and p in practical contexts I can tell and write the time from an analogue clock and 12-hour and 24-hour clocks I can estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, I know the number of seconds in a minute and the number of days in each month, year and leap year 	<ul style="list-style-type: none"> I can estimate, compare and calculate different measures, including money in pounds and pence I can estimate, compare and calculate different measures, including money in pounds and pence I measure and calculate the perimeter of a rectilinear figure And can find the area of rectilinear shapes by counting squares I can read, write and convert time between analogue and digital 12 and 24-hour clocks I can convert between different units of measure (e.g. kilometer to meter; hour to minute) I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 	<ul style="list-style-type: none"> I calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes I can measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) I can measure the perimeter of simple 2-D shapes I can calculate and compare the area of squares and rectangles including using standard units, square centimeters I can convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) 	<ul style="list-style-type: none"> I can calculate, estimate and compare volume of cubes and cuboids. I can estimate, compare and calculate different measures, including money in pounds and pence I can measure and calculate the perimeter of a rectilinear figure and calculate the area of parallelograms and triangles 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.

Mathematics Progression Map



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		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Geometry: Properties of shape.	<p>I can talk about and explore 2D and 3D shapes using informal and mathematical language: 'sides', 'corners', 'straight', 'flat', 'round'.</p> <p>I can select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.</p> <p>I can combine shapes to make new ones – an arch, a bigger triangle etc.</p>	<p>I can compose and decompose shapes so that I can recognise a shape can have other shapes within it, just as numbers can.</p> <p>I can identify 3d shapes – cube, cuboid, sphere, pyramid, cone, cylinder.</p>	<ul style="list-style-type: none"> I can recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> * 2-D shapes [e.g. rectangles (including squares), circles and triangles] * 3-D shapes [e.g. cuboids (including cubes), pyramids and spheres]. 	<ul style="list-style-type: none"> I can identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line I can identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces I can identify 2-D shapes on the surface of 3-D shapes 	<ul style="list-style-type: none"> I can draw 2-D shapes and make 3-D shapes using modelling materials I recognise angles as a property of shape or a description of a turn I can identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn I can identify whether angles are greater than or less than a right angle I can identify horizontal and vertical lines and pairs of perpendicular and parallel lines 	<ul style="list-style-type: none"> I can identify lines of symmetry in 2-D shapes presented in different orientations I can complete a simple symmetric figure with respect to a specific line of symmetry I compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes I can identify acute and obtuse angles and compare and order angles up to two right angles by size 	<ul style="list-style-type: none"> I can identify 3-D shapes, including cubes and other cuboids, from 2-D representations I can draw given angles, and measure them in degrees I use the properties of rectangles to deduce related facts and find missing lengths and angles I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles I know angles are measured in degrees: estimate and compare acute obtuse and reflex angles I can identify: <ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> I can recognise, describe and build simple 3-D shapes, including making nets I can illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius I can draw 2-D shapes using given dimensions and angles I can recognise, describe and build simple 3-D shapes, including making nets I can compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

Mathematics Progression Map



		<u>Nursery</u>	<u>Reception</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>	<u>Year 6</u>
Key National Curriculum Theme	Geometry: Position and direction.	I can understand position through words alone. I can describe a familiar route. I can discuss routes and locations, using words like 'in front of' and 'behind'. I can talk about and identify the patterns around me. I can extend & create ABAB patterns –stick, leaf, stick, leaf I can notice and correct an error in a repeating pattern. I am beginning to describe a sequence of events, real or fictional, using words such as 'first', 'then.'		<ul style="list-style-type: none"> I can describe position, direction and movement, including half, quarter and three-quarter turns. 	<ul style="list-style-type: none"> I 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) I can order and arrange combinations of mathematical objects in patterns and sequences 		<ul style="list-style-type: none"> I describe positions on a 2-D grid as coordinates in the first quadrant I can describe movements between positions as translations of a given unit to the left/right and up/down I can plot specified points and draw sides to complete a given polygon 	<ul style="list-style-type: none"> I 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 	<ul style="list-style-type: none"> I can describe positions on the full coordinate grid (all four quadrants) I can draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

Mathematics Progression Map



		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Statistics.				<ul style="list-style-type: none"> • I can interpret and construct simple pictograms, tally charts, block diagrams and simple tables • I ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • I ask and answer questions about totaling and comparing categorical data 	<ul style="list-style-type: none"> • I interpret and present data using bar charts, pictograms and tables • I can solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. 	<ul style="list-style-type: none"> • I interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs • I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. 	<ul style="list-style-type: none"> • I can complete, read and interpret information in tables, including timetables • I solve comparison, sum and difference problems using information presented in a line graph 	<ul style="list-style-type: none"> • I interpret and construct pie charts and line graphs and use these to solve problems • I calculate and interpret the mean as an average

Mathematics Progression Map



		Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Key National Curriculum Theme	Algebra			<ul style="list-style-type: none"> • I can solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \quad - 9$ • I can represent and use number bonds and related subtraction facts within 20 • I can sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening 	<ul style="list-style-type: none"> • I can recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. • I can recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • I compare and sequence intervals of time, order and arrange combinations of mathematical objects in patterns 	<ul style="list-style-type: none"> • I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. • I can solve problems, including missing number problems, involving multiplication and division, including integer scaling 	<ul style="list-style-type: none"> • I know perimeter can be expressed algebraically as $2(a + b)$ where a and b are the dimensions in the same unit. 	<ul style="list-style-type: none"> • I can use the properties of rectangles to deduce related facts and find missing lengths and angles 	<ul style="list-style-type: none"> • I express missing number problems algebraically • find pairs of numbers that satisfy number sentences involving two unknowns • enumerate all possibilities of combinations of two variables • I use simple formulae • recognise when it is possible to use formulae for area and volume of shapes • I know Perimeter can be expressed algebraically as $2(a + b)$ where a and b are the dimensions in the same unit.

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EYFS	
Size	tall, taller, big, little, middle size, small, medium, long, short, tiny, large, centimetres, thickest, enormous
Weight	heavy, heavier, light, lightest
Capacity	full, empty, half full, enough
Position	next to, between, behind, under, in front, over, high, on top, up, in, on, first, second, third, fourth
Distance	far away
Time	today, tomorrow, day after, Friday, Saturday, early, evening, pm, morning, 25th November, yesterday, night, calendar
Money	2p, 10p, pounds, enough, bill, change, amount, costs
Shape	circles, hexagons, square, rectangle, triangle, diamond, sphere, sides, corners, flat, curved

Year 1	
Number and place value	Ten more/less, digit, numeral, figure(s), compare, (in) order/a different order, size, value, between, halfway between, above, below, tens, ones
Addition and subtraction	Number bonds, number line, add, more, plus, make, sum, total, altogether, inverse, double, near double, equals, is the same as (including equals sign), difference between, subtract, take away, minus How many more to make ...?, How many more is ... than ...?, How much more is ...?, How many fewer is ... than ...?, How much less is ...?
Multiplication and division	Once, twice, three, five times, multiple of times Multiply, multiply by, repeated addition, array, row, column, double, halve, share, share equally, group in pairs, threes, etc., equal groups of, divide, divided by, left over

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<p>Measure</p>	<p>Time, days of the week, seasons, day, week, month, year, weekend, birthday, holiday, morning, afternoon, evening, night, midnight, bedtime, dinnertime, playtime, today, yesterday, tomorrow</p> <p>Before, after, next, last, now, soon, early, late, quick, quicker, quickest, quickly, fast, faster, fastest, slow, slower, slowest, slowly, old, older, oldest, new, newer, newest</p> <p>Takes longer, takes less time, hour, o'clock, half past, clock, watch, hands, how long ago?, How long will it be to ... ?, How long will it take to ... ?, How often?, always, never, often, sometimes, usually, once, twice, first, second, third, etc., estimate, close to, about the same as, just over, just under, too many, too few, not enough, enough</p> <p>Length, width, height, depth, long, longer, longest, short, shorter, shortest, tall, taller, tallest, high, higher, highest, Low, wide, narrow, deep, shallow, thick, thin, far, near, close, metre, ruler, metre stick</p> <p>How much?, How many?, money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change, dear(er), costs more, costs less, cheaper, costs the same as, total</p>
<p>Geometry (position and</p>	<p>Before, after, beside, next to, opposite, apart, between, middle, edge, centre, corner, direction, journey, left, right, up, down,</p>
<p>direction)</p>	<p>forwards, backwards, sideways, across, close, far, near, along, through, to, from, towards, away from, movement, slide, roll, turn, whole turn, half turn, stretch, bend</p>
<p>Geometry (properties of shape)</p>	<p>Corner (point, pointed), face, side, edge, make, build, draw</p>
<p>Fractions</p>	<p>Whole, equal parts, four equal parts, one half, two halves, a quarter, two quarters</p>
<p>Problem solving</p>	<p>Change, change over, split, separate, carry on, continue, repeat, what comes next?, find, choose, collect, use, make, build</p> <p>Tell me, describe, pick out, talk about, explain, show me, read, write, record, trace, copy, complete, finish,</p>

Mathematics Progression Map



Play, Learn and Grow Together!

	<p>end, fill in, shade, colour, tick, cross, draw, draw a line between, join (up), ring, arrow</p> <p>Cost, count, work out, answer, check same number(s)/different number(s)/missing number(s)</p> <p>Number facts, number line, number track, number square, number cards, abacus, counters, cubes, blocks, rods, die, dice, dominoes, pegs, peg board</p> <p>Same way, different way, best way, another way, in order, in a different order, not all, every, each</p>
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Year 2	
Number and place value	Numbers to one hundred, hundreds, partition, recombine, more/less
Measure	Quarter past/to, metres, kilometers, grams, kilograms, millimeters, liters, temperature, degrees
Geometry (position and direction)	Rotation, clockwise, anticlockwise, straight line, ninety degree turn, right angle
Geometry (properties of shape)	Size, bigger, larger, smaller, symmetrical, line of symmetry, fold, match, mirror line, reflection, pattern, repeating pattern
Fractions	Three quarters, one third, a third, equivalence, equivalent
Data/statistics	Count, tally, sort, vote, graph, block graph, pictogram, represent, group, set, list, table, label, title, most popular, most common, least popular, least common
Problem solving	Predict, describe the pattern, describe the rule, find, find all, find different, investigate

Year 3

Mathematics Progression Map



Number and place value	Numbers to one thousand
Addition and subtraction	Column addition and subtraction
Multiplication and division	Product, multiples of four, eight, fifty and one hundred, scale up
Measure	Leap year, twelve-hour/twenty-four-hour clock, Roman numerals I to XIII
Geometry (position and direction)	Greater/less than ninety degrees, orientation (same orientation, different orientation)
Geometry (properties of shape)	Horizontal, perpendicular and parallel lines
Fractions	Numerator, denominator, unit fraction, non-unit fraction, compare and order, tenths
Data/statistics	Chart, bar chart, frequency table, Carroll diagram, Venn diagram, axis, axe

Year 4	
Number and place value	Tenths, hundredths, decimal (places), round (to nearest), thousand more/less than, negative integers, count through zero, Roman numerals I to C
Multiplication and division	Multiplication facts (up to 12x12), division facts, inverse, derive
Measure	Convert
Geometry (position and direction)	Co-ordinate, translate, quadrant, X-axis, Y-axis, perimeter, area
Geometry (properties of shape)	Quadrilaterals, triangles, right, acute and obtuse angles
Fractions and decimals	Equivalent decimals and fractions
Data/statistics	Continuous data, line graph

Mathematics Progression Map



Play, Learn and Grow Together!

Year 5	
Number and place value	Powers of 10
Addition and subtraction	Efficient written method
Multiplication and division	Factor pairs, composite numbers, prime number, prime factors, square number, cubed number, formal written method
Measure	Volume
Geometry (position and direction)	Reflex angle, dimensions
Geometry (properties of shape)	Regular and irregular polygons
Fractions and decimals	Proper fractions, improper fractions, mixed numbers, percentage, half, quarter, fifth, two fifths, four fifths, ratio, proportion

Year 6	
Number and place value	Numbers to ten million
Addition and subtraction	Order of operations
Multiplication and division	Common factors and common multiples
Geometry (position and direction)	Four quadrants (for co-ordinates)
Geometry (properties of shape)	Vertically opposite (angles), circumference, radius, diameter
Fractions, decimals and percentages	Degree of accuracy, simplify
Algebra	Linear number sequence, substitute, variables, symbol, known values
Data/statistics	Mean, pie chart, construct

Mathematics Progression Map



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