Goat Lees Primary School - Maths Progression Map

		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number and Place Value	**Counting**	>Count from 0-10 >Represent numbers with fingers and other objects >Recognise that anything can be used to count >Begin to count from 0 to 20 Count an irregular arrangement of up to 10 objects	>Count to and across 100 >Count forwards and backwards within 100, in multiples of 1, 2, 5 or 10. >Count, read and write numbers to 100 in numerals >Find 1 more or 1 less of any given number within 100.	>Count in multiples of 2, 3, 5 and 10, from any number, forwards or backwards. >Find 10 more or 10 less than a given number within 100.	>Find 10 or 100 more or less than a given number within 1,000 >Count from 0 in multiples of 4,8, 50 and 100	>Count forwards and backwards in multiples of 2 to 12 and 25, 50, 100 and 1,000 >Count backwards through zero to include negative numbers	>Count forwards and backwards in multiples of 2 to 12, 25, 50, 100, 250, 500, 1,000 and 10,000 >Count backwards through zero to include negative numbers	>Count forwards and backwards in multiples of 2 to 12, 25, 50, 100, 250, 500, 1,000, 10,000 and 100,000s and millions >Count down in intervals across zero
	Comparing Numbers	>Compare amounts in two groups of objects >Compare quantities of identical and non-identical objects >Use the terms 'more than', 'greater than', 'less than' and 'fewer than'	>Use the terms 'more than,' 'greater than,' 'less than,' and 'fewer than' with numbers up to 50. >Use the terms 'most' and 'least.' >Use <,> and = to compare numbers	>Compare and order numbers from 0 to 100 >Use the <,> and = signs to compare numbers	>Compare and order numbers up to 1,000	>Compare numbers beyond 1,000	>Compare numbers up to 1,000,000	>Compare numbers up to 10,000,000

Identifying, representing and estimating numbers	>Match numeral to quantities >Select the correct numeral which represents 1-10 objects	>Find and estimate numbers on a number line >Match numeral to pictorial representations	>identify, represent and estimate numbers using different representations , including the number line	>Identify, represent and estimate numbers using different representations >Identify and write numbers up to 1,000 in numeral and words.	>Identify, represent and estimate numbers using different representations up to 10,000	>Identify, represent and estimate numbers using different representations up to 1000,000	>Identify, represent and estimate numbers using different representations up to 1000,000
Reading and Writing Numbers	>Begin to write numbers >Mark making to represent numbers >Write the correct numeral for a given number	>Read and write numbers from 0-10, then 0-20, then 0-50 and finally 0-100	>read and write numbers to at least 100 in numerals and in words	>read and write numbers to 1,000 in numerals and in words	>read and write numbers to 1,000 in numerals and in words >Read and write Roman Numerals to 100	>read and write numbers to 1,000,000 in numerals and in words >Read and write Roman Numerals to 1,000	>read and write numbers to 10,000,000 and beyond in numerals and in words
Understanding Place Value			>Understand the place value of each digit in a 2 digit number	>Understand the place value of each digit in a 3 digit number	>Understand the place value of each digit in a 4 digit number	>Understand the place value of each digit in a 5 digit number	>Understand the place value of each digit in a 6 digit number and beyond
Rounding					>Round to the nearest 10, 100 or 1,000	>Use rounding to check answers to + and – answers and determine levels of accuracy with an answer. >Round whole numbers to 10,100 or 1,000 >Round decimal numbers to the nearest whole number and to 1 decimal place.	>Round any whole number >Round with decimals up to 2 decimal places. >Round decimal remainders to the nearest decimal place or whole number.

				>Use place value and number facts to solve problems	>Solve number problems and practical problems involving place value.	> Solve number and practical problems that involve all of our place value skills and with increasingly large positive numbers.	> Solve problems involving multiplying and adding, including those 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.'	> Solve number and practical problems that involve our place value skills.
Problem Solving								

Goat Lees Primary School - Maths Progression Map

		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction	**Number bonds**	>Number bonds to 5 >Number bonds to 10 using a ten frame >Number bonds to 10 with a part-whole model	Represent and use number bonds and related subtraction facts within 20.	>Recall and use addition and subtraction facts to 20 fluently >Derive related facts for addition and subtraction to 100	>Use number bonds to 10 and grow these x10 to support addition and subtraction with 10s and 100s			
	Mental calculations	>Find one more and one less >Combine two groups to find the whole number. >Add by counting on >Subtract by counting back	>Add and subtract one digit and two digit numbers to 20, including with zero >Read write and interpret mathematical statements involving addition +, subtraction – and equals = signs	>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 adding two numbers can be done in any order (commutativity) and subtraction of one number from another cannot.	>Add and subtract with one-digit numbers within formal written methods >Add and subtract mentally up to 3 digits including: -a three-digit number and ones -a three-digit number and tens -a three-digit number and hundreds.	>Add and subtract with one-digit numbers within formal written methods	>+ and – numbers mentally with increasingly large numbers >Add and subtract decimals within and beyond 1 >Find the difference between negative numbers and integers. >+ and – with negative numbers by counting forwards and backwards.	

Written methods	>Add and subtract one digit and two digit numbers to 20, including with zero >Read write and interpret mathematical statements involving addition +, subtraction – and equals = signs	>Write addition and subtraction calculations involving: - a two-digit number and ones -a two-digit number and tens -two two-digit numbers -adding three one-digit numbers >Draw part-whole models, Base 10 (or Dienes) representations and use place value charts to help with + and – calculations >Write out + and – sentences where = can come before or after the calculation >View and understand how column addition and subtraction can work in preparation for Year 3	>Use formal written 'column' addition and subtraction >Use place-value counters to support my understanding of column methods	>Use formal written 'column' addition and subtraction with 4-digit numbers >Use place-value counters to support my understanding of column methods	>+ and – with more than 4 digits in formal written methods (column addition and subtraction) >+ and – subtract with decimal numbers in formal written methods.	>Revise + and – with up to 8-digits in formal written methods (column addition and subtraction) >+ and – subtract with decimal numbers in formal written methods.

				>Recognise and use inverse relationship between + and – to check calculations and solve missing number problems.	>Estimate answers to an + or – calculation and use the inverse operation to check my answers >Solve missing number problems using number facts, place value and more complex + and – methods	>Estimate answers to an + or – calculation and use the inverse operation to check my answers	>Use rounding to check answers to calculation and determine, in the context of a problem, levels of accuracy.	>Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.
Inverse operations, estimating and checking answers								
Problem solving	>Sort totals into groups	>Solve one-step problems that involve + and -, using concrete objects and pictorial representations and missing number problems such as 8 = _ - 4	>Solve + and – problems -using concrete objects and pictorial representations, numbers, quantities and measures -apply mental and written methods to solve a problem >Solve simple problems in a practical context, involving + and – of money of the same unit, including giving change.	>Solve missing number problems using number facts, place value and more complex + and – methods >Solve one and two-step questions, using addition and subtraction skills in other areas (ie: statistics – 'How many more?...)	>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	>Solve + and – multi-step problems in contexts, deciding which operations and methods to use and why.	>Solve + and – multi-step problems in contexts, deciding which operations and methods to use and why. >Carry out multi-step problems involving all four operations. >Apply BIDMAS rules of the order of operations to answer questions.

Goat Lees Primary School - Maths Progression Map

		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication and Division	**Multiplication and Division Facts**	>Doubling >Halving >Odds and Evens	>Count in multiples of twos, fives and tens	>Count in twos, fives, tens and threes, from any number within 100, forwards and backwards. >Recall and use X and ÷ facts for 2s 5s and 10s multiplication tables, including recognising odd and even numbers.	>Count from 0 in multiples of 4, 8, 50 and 100 >Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables >Find and interpret multiples of 10 >Know related calculations between different times tables (4x2 = 8 so 4x4 = 16)	>Recall and use X and ÷ facts for multiplication tables up to 12 x 12 >Count in multiples of 6, 7, 9, 25 and 1000.	>Continue to practise using the multiplication tables and related division facts up to 12 x 12 >Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers >Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3) >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	

Mental calculations				>Show that multiplication of two numbers can be done in any order, and division of one number cannot be done in any order.	>Recall and use multiplication and division facts for the 2, 5, 10, 3, 4 and 8 multiplication tables >Understand scales between two amounts using X and ÷	>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 and divide numbers mentally, drawing upon known facts.	>Perform mental calculations, including with mixed operations and large numbers.
Written calculations				>calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs	>Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. >X 2 digits by 1 digit and ÷2 digits by 1 digit with formal written methods.	>Multiply three numbers >Multiply two and three digit numbers by a one digit number using formal written layout. >Use formal written method to ÷ 3 digits by 1 digit		>Multiply multi-digit numbers up to 4-digits by a 2-digit number using the formal written method of long multiplication. >Divide numbers up to 4-digits by a 2-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.

Note: The table headers "Mental calculations" and "Written calculations" appear as vertical labels in the left columns.

Problem solving		>Solve one-step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representation and arrays, with the support of the teacher.	>Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	>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 objectives. >Answer reasoning questions, using X and ÷ skills.	>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	>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. >Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy. >Calculate the mean as an average.

		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions, decimals and percentages	Recognising and comparing fractions, decimals and percentages		>Recognise, find and name a half as one of two equal parts and a quarter as one of four equal parts of an object, shape or quantity.	>Recognise equal and unequal parts >Recognise unit fractions: ½ ¼ and 1/3 >Recognise non-unit fractions: 2/4 2/3 ¾	>Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 >Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.	> Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. >Compare numbers with the same number of decimal places up to two decimal places.	>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >Read, write, order and compare numbers with up to three decimal places. >Recognise and use 1000ths 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. >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.	>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. >Compare and order fractions, including fractions > 1. >Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1000, giving answers up to 3 decimal places.

Counting with Fractions, Decimals & Percentages	>			>Count up in fractions (halves, quarters, thirds) up to one whole.	>Count up and down in tenths	>Count up and down in hundredths;	>Calculate the whole, when we know what a fraction of the whole amount is.	>Generate and describe linear number sequences (with fractions).
Calculations with fractions decimals and percentages				>Find simple fractions of objects, quantities and amounts, using pictorial division methods to answer arithmetic and reasoning questions.	>Recognise, find and write fractions of a discrete set of objects, including unit and non-unit fractions. >Recognise, find, name and write fractions 1/3 ¼ ½ 2/4 2/3 ¾ of a length, shape, set of objects or quantity	> Add and subtract fractions with the same denominator. > Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths. >Convert between different units of measure (for example, kilometre to metre). >Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths or hundredths.	>Add and subtract fractions with the same denominator and denominators that are multiples of the same number. >Multiply proper fractions and mixed numbers by integers (whole numbers) supported by materials and diagrams. >Calculate fractions of a quantity >Find fractions of amounts	>Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. >Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example ¼ x ½ = 1/8] >Divide proper fractions by whole numbers. >Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. >Multiply one-digit numbers with up to 2 decimal places by whole numbers. Use written division methods in cases where the answer has up to 2 decimal places.

Reasoning with Fractions, Decimals & Percentages				>Use pictorial representations to solve simple reasoning problems and questions, involving fractions.	>Solve reasoning problems involving all of the above fractions skills.	>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. > Solve simple measure and money problems involving fractions and decimals to two decimal places.	>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. >Solve problems involving numbers up to three decimal places >Solve problems which require knowing percentage and decimal equivalents of 12, 14, 15, 25, 45 and those fractions with a denominator of a multiple of 10 or 25	>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate >Solve problems which require answers to be rounded to specified degrees of accuracy. >Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360°] and the use of percentages for comparison.

	Equivalence						
				>Recognise the equivalence of ½ and 2/4 within pictorial representations	>Write simple fractions and find equivalents with quarters, halves and thirds >Read and write tenths as decimals and fractions.	>Recognise and show, using diagrams, families of common equivalent fractions. > Recognise and write decimal equivalents of any number of tenths or hundredths. >Recognise and write decimal equivalents to ¼ ½ ¾	>Compare and order fractions whose denominators are multiples of the same number. >Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. Read and write decimal numbers as fractions [for example 0.71 = 71/100]	>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra	**Equations**		> solve one -step problems that involve addition and subtraction, using concrete objects and pictorial representations , and missing number problems such as 7 = __ - 9 represent and use number bonds and related subtraction facts within 20	> recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 >understand and complete calculations where pictures are used to represent numbers in a calculation	>use inverse operations to check calculations and find the missing number in + and - questions >understand and complete calculations where pictures are used to represent numbers in a calculation	>use inverse operations to check calculations and find the missing number in +, -, x and ÷ questions >understand and complete calculations where pictures are used to represent numbers in a calculation	>use inverse operations to check calculations and find the missing number in +, -, x and ÷ questions >understand and complete calculations where pictures are used to represent numbers in a calculation	> Use simple formulae > Express missing number problems algebraically > Find pairs of numbers that satisfy an equation with two unknowns. > Enumerate possibilities of combinations of two variables.
	Sequences	>sequence events that happen during our school day in chronological order. >copy and continue patterns of objects	> sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening	> compare and sequence intervals of time order >arrange combinations of mathematical objects in patterns >continue sequences of 2, 3, 5 and 10,	> compare and sequence intervals of time order >continue sequences with multiples of 4,8, 50 and 100	>continue sequences with multiples of 2 to 12 and 25, 50, 100 and 1,000, including counting backwards with negative numbers	>continue sequences with multiples of 2 to 12, 25, 50, 100, 250, 500, 1,000 and 10,000 including counting backwards with negative numbers. >Continue and complete number sequences.	> Generate and describe linear number sequences, including with fractions.

		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement	Compare and Estimate		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] >sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon	>compare the sizes of shapes and objects >compare the volume and capacity within different containers >compare the duration of different events with minutes or hours	>compare the perimeter of 2D shapes >Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). >compare the volume and capacity within different containers > Estimate and read time with increasing accuracy to the nearest minute. >Record and compare time in terms of seconds, minutes and hours. > Compare durations of events [for example to calculate the time taken by particular events or tasks].	>Find the area of rectilinear shapes by counting squares >Compare areas > Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. >> Estimate, compare and calculate different measures including money in pounds and pence.	>Calculate and compare the area of rectangles (including squares), and including using standard units, cm2, m2 estimate the area of irregular shapes. >Compare & estimate volume >Estimate capacity	> Recognise that shapes with the same areas can have different perimeters and vice versa.

| Measure and Calculate | >Daily routine >Recognise length, height and distance >Understand the difference between mass and capacity | >measure and begin to record the following: * lengths and heights * mass * capacity and volume * time (hours, minutes, seconds) | >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 | > Measure the perimeter of simple 2D shapes. >calculate the perimeter of 2D shapes > Use scales to Measure in mass and kilograms > Measure capacity and volume in ml and l using measuring jugs >+ and – with capacity and volume > Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks. > Add and subtract amounts of money to give change, using both £ and p in practical contexts. | >Solve simple measure and money problems involving fractions and decimals to two decimal places. | > Measure and calculate the perimeter of composite rectilinear shapes in cm and m. >Understand cubic centimetres > Calculate the area of parallelograms and triangles. >Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm3, m3 and extending to other units (mm3, km3) | >Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360˚] and the use of percentages for comparison. >Recognise when it is possible to use formulae for area and volume of shapes. >Measure angles with a protractor in ˚ >Draw angles using a protractor >Draw polygons using a protractor and ruler to accurately measure interior angles and side lengths. |

	Time	>Daily routine Order and sequence events >measure short periods of time	>ell 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 language relating to dates, including days of the week, weeks, months and years	>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.	> Estimate and read time with increasing accuracy to the nearest minute. >Record and compare time in terms of seconds, minutes and hours. > Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks. > Compare durations of events [for example to calculate the time taken by particular events or tasks].	>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 units of time >Calculate with timetables	
	Money		>recognise and know the value of different denominations of coins and notes	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	> Add and subtract amounts of money to give change, using both £ and p in practical contexts.	> Estimate, compare and calculate different measures including money in pounds and pence. >Solve simple measure and money problems		

				context involving addition and subtraction of money of the same unit, including giving changex		involving fractions and decimals to two decimal places.	
	Converting			>know the number of minutes in an hour and the number of hours in a day. >know that 100p =£1 and use this to solve measurement questions.	>Find equivalent masses in g and kg	>Convert between different units of measure (for example, kilometre to metre). > convert time between analogue and digital 12- and 24-hour clocks.	> Convert with kilograms and kilometres Convert with millimetres and millilitres Convert between units of length Convert between metric and imperial units Convert units of time Calculate with timetables > Understand cubic centimetres	>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 3dp. >Convert between miles and kilometres.

Goat Lees Primary School - Maths Progression Map

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Geometry: Property of Shape	**Identify Shapes and their Properties**	>Recognise 2-D shapes and 3-D shapes, using Mathematical terms. >Select a particular named shape.,	>Recognise 2-D and 3-Shapes including: -2-D squares, circles and triangles. -3-D cuboids, cubes, pyramids and spheres	>Identify the properties of 2-D shapes, including number of sides and vertical lines of symmetry. >Identify & describe the properties of 3-D shapes including edges, vertices and faces >Identify the 2-D shapes in the faces of 3-D shapes	>Recognise angles as a property of shape 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 horizontal and vertical lines and pairs of perpendicular and parallel lines. Recognise 3-D shapes in different orientations and describe them.	> Identify acute and obtuse angles > Identify lines of symmetry in 2-D shapes presented in different orientations.	> Identify 3D shapes, including cubes and other cuboids, from 2D representations. Use the properties of rectangles to deduce related facts	>Recognise that shapes with the same areas can have different perimeters and vice versa. > Compare and classify geometric shapes based on their properties and sizes >Describe positions on the full coordinate grid (all four quadrants).

Drawing and Constructing	>Make simple patterns involving shapes. >Explore more complex patterns		>Draw 2-D shapes, using our knowledge of properties to draw them. >Complete a simple symmetrical shape reflecting on a vertical line of symmetry.	> Draw 2-D shapes and make 3-D shapes using modelling materials.	>Complete a simple symmetric figure with respect to a specific line of symmetry. > Plot specified points and draw sides to complete a given polygon.	> Draw given angles, and measure them in degrees (°)	>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. > Draw 2-D shapes using given dimensions and angles.
Comparing and Classifying	>Order 2 or 3 items by length and height >Order 2 items by mass or capacity.		>Compare and sort common 2-D and 3-D shapes and everyday objects	>Identify whether angles are greater than or less than a right angle	>Compare the area of different shapes. > compare and order angles up to two right angles by size. >Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. >Describe positions on a 2-D grid as coordinates in the first quadrant	>Compare the area of rectangles (including squares) > Find missing lengths and angles. > Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	>Compare the volume of cubes and cuboids

| Measuring and Calculating | | | | | >Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). >Measure the perimeter of simple 2D shapes. | >Find the area of rectilinear shapes by counting squares > Measure and calculate the perimeter of a rectilinear figure(including squares) in centimetres and metres | > Measure and calculate the perimeter of composite rectilinear shapes in cm and m. > Calculate the area of rectangles (including squares), and including using standard units, cm2, m2 >Estimate the area of irregular shapes. > Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. > Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and a ½ turn (total 180°) other multiples of 90° | >Recognise when it is possible to use formulae for area and volume of shapes. >Calculate the area of parallelograms and triangles. >Calculate and estimate volume of cubes and cuboids using standard units, including cm3, m3 and extending to other units (mm3, km3) >Find unknown angles in any triangles, quadrilaterals and regular polygons. >Find missing angles on a straight lines or intersecting lines. |

		Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: Position and Direction	**Position, Direction and Movement**	>Describe the position of an object >Use positional language >Follow instructions and describe movements, using maps.	>Describe position, direction and movement, including ½ ¼ and ¾ turns.	> 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 >Describe movements using up, down, left and right. >Find locations using up, down, left and right.	>Recognise angles as a description of a turn	> Describe movements between positions as translations of a given unit to the left/right and up/down	> 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.	>Translate simple shapes on the coordinate plane, and reflect them in the axes.
	Patterns	> Use common shapes to create patterns and build models		>Order and arrange combinations of mathematical objects in patterns and sequences				

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Statistics	**Read and Interpret Data**			> Read and interpret tables >Read and interpret block diagrams >Interpret Pictograms	>Interpret data in bar charts, pictograms and tables.	>Interpret discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	>Read and interpret information in tables including timetables.	> Interpret dual-bar charts >Interpret pie charts. >Interpret line graphs
	Construct Charts and Tables			>Make tally charts >Construct pictograms with no scale >Construct Pictograms with a scale of 2, 5 and 10	> Present data using bar charts, pictograms and tables.	>Present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	>Present and complete information in tables including timetables.	> Construct and interpret dual-bar charts >Construct pie charts using degrees and fractions/percentages of 360° >Construct line graphs and use these to solve problems.
	Calculations with Data			>Calculate how many responses there were in total. >Calculate the difference between amounts in a tally chart, pictogram or block diagram.	> 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.	>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.	>Calculate the size of angles to construct pie charts. >Calculate the mean as an average.