CORBY PRIMARY ACADEMY

THE MATHS CURRICULUM: A PROGRESSION

Whole School Maths Progression Map

At Corby Primary Academy, maths plays an essential role within our curriculum, fostering confident mathematicians who are fluent in the fundamentals of mathematics. From the Early Years through to Upper Key Stage 2, teachers and pupils collaborate to develop a deep understanding of mathematical concepts, using a range of concrete manipulatives and visual representations. Language is carefully woven into each lesson, enabling pupils to articulate their reasoning with clarity and precision. Our teachers design inclusive and memorable learning experiences that inspire pupils to explore patterns, make generalisations, and be bold in forming arguments, justifications, and proof.

Prior learning and key concepts are revisited in every lesson through a 'Flashback' activity. This approach enables pupils to regularly retrieve and reinforce prior knowledge, ensuring sustained understanding and application over time.

Our curriculum for maths ensures that all pupils:

- develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- reason mathematically by making connections, following a line of enquiry, conjecturing relationships and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering to seek solutions

Maths in the Early Years

The seven areas of learning within the EYFS framework mean that it is structured differently to the National Curriculum. In Reception, we follow the Mastering Number scheme of work which is divided into 3-weekly units. High quality learning environments and meaningful interactions with adults support children in developing mathematical thinking and discussion. Pupils learn through games and tasks using concrete manipulatives and pictorial structures and representations which are then rehearsed, applied and recorded within their own child-led exploration.

In Nursery, our 3 and 4-year-olds will be working towards achieving the following 'Development Matters' guidance statements:

- develop fast recognition of up to 3 objects, without having to count them individually ('subitising')
- recite numbers past 5
- say one number for each item in order: 1,2,3,4,5
- know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle')
- show 'finger numbers' up to 5
- link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5

Long Term Plan 26-27

Maths LTP 26-27	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
N	• Counting • Comparing • Measuring • Subitising • Counting • 1:1 correspondence • Subitising • 2D and 3D Shapes		• Counting • Partitioning • Pattern • Numerals • More/less comparison • Sorting • Measure • Position • Routes		• Numerals • Measures • Sequencing • More/ less • Comparing • Numerals • Addition • Shapes	
R	<u>Mastering Number</u> Pupils will build on previous experiences of number from their home and nursery environments and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. Pupils will: • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers <u>Shape Space and Measures - (WRM)</u> • Talk about measures and patterns • Circles and triangles • Shapes with 4 sides		<u>Mastering Number</u> Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. Pupils will: • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups <u>Shape Space and Measures - (WRM)</u> • Mass and Capacity • Length, Height and Time • Explore 3D shapes		<u>Mastering Number</u> Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. Pupils will: • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2 <u>Shape Space and Measures - (WRM)</u> • Explore 3D shapes • Manipulate, compose and decompose	

Maths Progression Map

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Year 1	Number: Place Value (within 10) Number: Addition and Subtraction - Number Bonds	Number: Addition and Subtraction (within 10) Geometry: Shape	Number: Place Value (within 20) Number: Addition and Subtraction (within 20)	Number: Place Value (within 50) Measurement: Length and Height Measurement: Mass and Volume	Number: Multiplication and Division Number: Fractions *Number: Place Value (within 100)*	*Geometry: Position and Direction* Measurement: Money Measurement: Time
Year 2	Number: Place Value Number: Addition and Subtraction	Number: Addition and Subtraction *Measurement: Money*	Number: Multiplication and Division *Geometry: Shape*	Measurement: Length and Height Measurement: Mass, Capacity and Temperature	Number: Fractions Measurement: Time	Statistics Geometry: Position and Direction
Year 3	Number: Place Value Number: Addition and Subtraction	Number: Addition and Subtraction Number: Multiplication and Division A	Number: Multiplication and Division B Measurement: Length and Perimeter	Number: Fractions A *Number: Fractions B*	*Measurement: Mass and Capacity* Measurement: Money Measurement: Time	Measurement: Time Geometry: Shape Statistics
Year 4	Number: Place Value Number: Addition and Subtraction	*Number: Multiplication and Division A and B combined* *Measurement: Area*	Measurement: Length and Perimeter Number: Fractions	Number: Fractions Number: Decimals A	Number: Decimals B Measurement: Money Measurement: Time	Geometry: Shape Statistics Geometry: Position and Direction
Year 5	Number: Place Value Number: Addition and Subtraction	Number: Multiplication and Division A Number: Fractions A	Number: Multiplication and Division B Number: Fractions B Number: Decimals and Percentages	Number: Decimals and Percentages Measurement: Perimeter and Area Statistics	Geometry: Shape Geometry: Position and Direction	Number: Decimals Number: Negative Numbers Measurement: Converting Units Measurement: Volume
Year 6	Number: Place Value Number: Addition, Subtraction, Multiplication and Division	Number: Fractions A and B Measurement: Converting Units	*Number: Decimals* *Number: Fractions, Decimals and Percentages*	Measurement: Area, Perimeter and Volume *Number: Ratio* *Number: Algebra*	*Statistics* Geometry: Shape Geometry: Position and Direction	Investigations and consolidation

Number and place value

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s • given a number, identify 1 more and 1 less • identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • read and write numbers from 1 to 20 in numerals and words	• count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward • recognise the place value of each digit in a two-digit number (10s, 1s) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems	• count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward • recognise the place value of each digit in a two-digit number (10s, 1s) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems	• count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward • recognise the place value of each digit in a two-digit number (10s, 1s) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems	• count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward • recognise the place value of each digit in a two-digit number (10s, 1s) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems	• 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 0 • solve number and practical problems that involve all of the above

Maths Progression Map

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Addition and subtraction

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

• read, write and interpret mathematical statements involving addition (+), subtraction (—) and equals (=) signs
• represent and use number bonds and related subtraction facts within 20
• add and subtract one-digit and two-digit numbers to 20, including 0
• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? — 9
	• solve problems with addition and subtraction:
	  ○ using concrete objects and pictorial representations, including those involving numbers, quantities and measures
	  ○ applying their increasing knowledge of mental and written methods
	• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
	• add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
	  ○ a two-digit number and 1s
	  ○ a two-digit number and 10s
	  ○ 2 two-digit numbers
	  ○ adding 3 one-digit numbers
	• show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot
	• recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
		• add and subtract numbers mentally, including:
		  ○ a three-digit number and 1s
		  ○ a three-digit number and 10s
		  ○ a three-digit number and 100s
		• add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction
		• estimate the answer to a calculation and use inverse operations to check answers
		• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction
			• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
			• estimate and use inverse operations to check answers to a calculation
			• solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why
				• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
				• add and subtract numbers mentally with increasingly large numbers
				• use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy
				• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
					• 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 calculations and determine, in the context of a problem, an appropriate degree of accuracy

Maths Progression Map

Corby Primary Academy

Multiplication and division

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• 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 **Notes and guidance (non-statutory)** Through grouping and sharing small quantities, pupils begin to understand: • multiplication and division • doubling numbers and quantities • finding simple fractions of objects, numbers and quantities They make connections between arrays, number patterns, and counting in 2s, 5s and 10s.	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	• identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19 • multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • multiply and divide numbers mentally, drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 • recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) • solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	• identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • establish whether a number up to 100 is prime and recall prime numbers up to 19 • multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • multiply and divide numbers mentally, drawing upon known facts • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 • recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) • solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	• multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • perform mental calculations, including with mixed operations and large numbers • identify common factors, common multiples and prime numbers • use their knowledge of the order of operations to carry out calculations involving the 4 operations • 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

Fractions, decimals and percentages

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity • recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity	• recognise, find, name and write fractions [Fraction:1/3], [Fraction:1/4], [Fraction:2/4] and [Fraction:3/4] of a length, shape, set of objects or quantity • write simple fractions, for example [Fraction:1/2] of 6 = 3 and recognise the equivalence of [Fraction:2/4] and [Fraction:1/2]	count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators recognise and show, using diagrams, equivalent fractions with small denominators add and subtract fractions with the same denominator within one whole [for example, [Fraction:5/7]+[Fraction:1/7] = [Fraction:6/7]] compare and order unit fractions, and fractions with the same denominators solve problems that involve all of the above	• recognise and show, using diagrams, families of common equivalent fractions • count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number • add and subtract fractions with the same denominator • recognise and write decimal equivalents of any number of tenths or hundreds • recognise and write decimal equivalents to [Fraction:1/4], [Fraction:1/2], [Fraction:3/4] • find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • round decimals with 1 decimal place to the nearest whole number • compare numbers with the same number of decimal places up to 2 decimal places • solve simple measure and money problems involving fractions and decimals to 2 decimal places	• compare and order fractions whose denominators are all multiples of the same number • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, [Fraction:2/5]+[Fraction:4/5] = [Fraction:6/5] = 1 [Fraction:1/5]] • 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 = [Fraction:71/100]] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with 2 decimal places to the nearest whole number and to 1 decimal place • read, write, order and compare numbers with up to 3 decimal places • solve problems involving number up to 3 decimal places • recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction • solve problems which require knowing percentage and decimal equivalents of [Fraction:1/2], [Fraction:1/4], [Fraction:1/5], [Fraction:2/5], [Fraction:4/5] and those fractions with a denominator of a multiple of 10 or 25	• 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 [for example, [Fraction:1/4] × [Fraction:1/2] = [Fraction:1/8]] • divide proper fractions by whole numbers [for example, [Fraction:1/3] ÷ 2 = [Fraction:1/6]] • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, [Fraction:3/8]] • identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places • 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 • 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

Maths Progression Map

Corby Primary Academy

Measurement

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

• compare, describe and solve practical problems for:
  • lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]
  • mass/weight [for example, heavy/light, heavier than, lighter than]
  • capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
  • time [for example, quicker, slower, earlier, later]
• 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]
• 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
	• 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 =
	• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
	• find different combinations of coins that equal the same amounts of money
	• solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
	• compare and sequence intervals of time
	• tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
	• know the number of minutes in an hour and the number of hours in a day
		• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
		• measure the perimeter of simple 2-D shapes
		• 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; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight
		• know the number of seconds in a minute and the number of days in each month, year and leap year
		• compare durations of events [for example, to calculate the time taken by particular events or tasks]
			• convert between different units of measure [for example, kilometre to metre; hour to minute]
			• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
			• find the area of rectilinear shapes by counting squares
			• estimate, compare and calculate different measures, including money in pounds and pence
			• read, write and convert time between analogue and digital 12- and 24-hour clocks
			• solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days
				• convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre]
				• understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
				• measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
				• calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes
				• estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]
				• solve problems involving converting between units of time
				• use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling
					• solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 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 3 decimal places
					• convert between miles and kilometres
					• recognise that shapes with the same areas can have different perimeters and vice versa
					• recognise when it is possible to use formulae for area and volume of shapes
					• calculate the area of parallelograms and triangles
					• calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]

Geometry – properties of shapes

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

• recognise and name common 2-D and 3-D shapes, including:
  • 2-D shapes [for example, rectangles (including squares), circles and triangles]
  • 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]
	• draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
	• recognise angles as a property of shape or a description of a turn
	• identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 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
		• draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
		• recognise angles as a property of shape or a description of a turn
		• identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 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
			• compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes
			• identify acute and obtuse angles and compare and order angles up to 2 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
				• draw 2-D shapes using given dimensions and angles
				• recognise, describe and build simple 3-D shapes, including making nets
				• compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
				• illustrate and name parts of circles, including radius, 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
					• draw 2-D shapes using given dimensions and angles
					• recognise, describe and build simple 3-D shapes, including making nets
					• compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
					• illustrate and name parts of circles, including radius, 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

Geometry – position and direction

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• describe position, direction and movement, including whole, half, quarter and three-quarter turns	• order and arrange combinations of mathematical objects in patterns and sequences • use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)		• describe positions on a 2-D grid as coordinates in the first quadrant • describe movements between positions as translations of a given unit to the left/right and up/down • plot specified points and draw sides to complete a given polygon	• identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	• describe positions on the full coordinate grid (all 4 quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes

Statistics

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
•	• 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 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	• describe positions on the full coordinate grid (all 4 quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes •	• describe positions on the full coordinate grid (all 4 quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes •

Ratio and proportion

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					• solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts • solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison • solve problems involving similar shapes where the scale factor is known or can be found • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples •

Algebra

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					• use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with 2 unknowns • enumerate possibilities of combinations of 2 variables •

NOTE - Although algebra is formally introduced in Y6, children are exposed to algebraic thinking much earlier. Although it's not called "algebra", pupils develop the foundations in Years 3-5 in a range of ways:

- Finding rules and patterns.
- Missing number calculations:
  - $\square + 45 = 92$
  - $6 \times \square = 54$
- Function machines.
- Reasoning about relationships between numbers.