Maths Progression

This document provides detail on how our White Rose Maths Curriculum progresses through topics year on year and how this links to the National Curriculum.

We have mapped this progression through our major strands (Number, Measurement, Geometry and Statistics) and broken down into key areas. We have mapped which National Curriculum objectives are covered in that year, together with the term and block in which that objective is met for the first time. This does not mean that the objective will not be revisited over the year; this is when they will be introduced and the connections and links to future learning made when necessary.

Our White Rose schemes of learning then break this objective down into small steps of learning, the component parts of knowledge for success. These allow children to build the prerequisite knowledge and skills to be successful in the composite objective.

Number - Place Value: • Count • Represent • Use and Compare • Problems and Rounding	**Number - Addition and Subtraction:** • Calculations • Problems	**Number - Multiplication and Division:** • Recall/Use • Calculations • Problems	**Number - Fractions:** • Recognise and write • Compare • Calculations • Solve Problems • Decimals: Recognise, Write, Compare • Fractions, Decimals and Percentages • Ratio and Proportion
Measures: • Using measures • Money • Time • Perimeter, Area and Volume	**Geometry:** • 2-D shape • 3-D shape • Angles and Lines • Position and Direction	**Statistics:** • Present and Interpret data • Solving Statistical Problems	**Algebra:** • Algebraic thinking

Place Value: Count							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Develop 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: 1-5 (1:1 correspondence) Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle')	Count objects, actions and sounds Count beyond ten Link the number symbol (numeral) with its cardinal number value. **ELG:** Have a deep understanding of number to 10, include composition of each number Verbally count beyond 20, recognising the pattern of the counting system	Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count numbers to 100 in numerals; count in multiples of twos, fives and tens Autumn 1 Spring 1 Spring 3 Summer 4	Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Autumn 1	Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number Autumn 1 Autumn 3	Count in multiples of 6, 7, 9, 25 and 1000 Count backwards through zero to include negative numbers Autumn 1 Autumn 4	Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 Count forwards and backwards with positive and negative whole numbers, including through zero Autumn 1 Summer 4	

Place Value: Represent							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Show 'finger numbers' up to 5 Link numerals and amounts: showing the right number of objects to match the numeral up to 5 Experiment with their own symbols and marks as well as numerals	Explore composition of numbers to 10. **ELG:** Deep understanding of number to 10, including composition of each number Subitise (recognise without counting) to 5 Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity	Identify and represent numbers using objects and pictorial representations read and write numbers to 100 in numerals Read and write numbers from 1 to 20 in numerals and words Autumn 1 Spring 1 Spring 3 Summer 4	Read and write numbers to at least 100 in numerals and in words Identify, represent and estimate numbers using different representations, including the number line Autumn 1	Identify, represent and estimate numbers using different representations Read and write numbers up to 1000 in numerals and in words Autumn 1	Identify, represent and estimate numbers using different representations Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value Autumn 1	Read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit Read Roman numerals to 1000 (M) and recognise years written in Roman numerals Autumn 1	Read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit Autumn 1

Place Value: Use and Compare							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Compare quantities using language: 'more than', 'fewer than'.	Compare numbers Understand the 'one more than/one less than' relationship between consecutive numbers	Given a number, identify one more and one less Autumn 1 Spring 1 Spring 3 Summer 4	Recognise the place value of each digit in a two-digit number (tens, ones) Compare and order numbers from 0 up to 100; use <, > and = signs Autumn 1	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Compare and order numbers up to 1000 Autumn 1	Find 1000 more or less than a given number Recognise the place value of each digit in a four-digit number (thousands,hundreds, tens, and ones) Order and compare numbers beyond 1000 Autumn 1	(Read, write) Order and compare numbers to at least 1,000,000 and determine the value of each digit Autumn 1	(Read, write) Order and compare numbers up to 10 000 000 and determine the value of each digit Autumn 1

Place Value: Problems and Rounding							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			Use place value and number facts to solve problems Autumn 1	Solve number problems and practical problems involving these ideas Autumn 1	Round any number to the nearest 10, 100 or 1000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers Autumn 1	Interpret negative numbers in context Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 Solve number problems and practical problems that involve all of the above Autumn 1	Round any whole number to a required degree of accuracy Use negative numbers in context, and calculate intervals across zero Solve number and practical problems that involve all of the above Autumn 1

Addition and Subtraction: Calculations							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Automatically recall number bonds for numbers 0–5 and some to 10 **ELG:** 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	Add and subtract one-digit and two-digit numbers to 20, including zero Autumn 2 Spring 2	Add and subtract numbers using concrete objects, pictorial representations and mentally including: - 2-digit number and ones - 2-digit number and tens - two 2-digit numbers - adding three 1-digit numbers Autumn 2	Add and subtract numbers mentally, including: - 3-digit number and ones - 3-digit number and tens - 3-digit number and hundreds Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction Autumn 2	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Autumn 2	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 Autumn 2	Perform mental calculations, including with mixed operations and large numbers Use their knowledge of the order of operations to carry out calculations involving the four operations Autumn 2

Addition and Subtraction: Problems							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
		Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as 7 = __ – 9 Autumn 2 Spring 2	Solve problems with addition, subtraction: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods Autumn 2	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction Autumn 2	Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why Autumn 2	Solve + and - multi-step problems in contexts, deciding which operations and methods to use and why Solve problems with all 4 operations and a combination of these, including understanding the meaning of the equals sign Autumn 2	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Autumn 2

Multiplication and Division: Recall and Use							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	ELG: Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally	Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers Summer	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Spring 2	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Autumn 3 Spring 1	Recall multiplication and division facts for times tables up to 12 × 12 Use place value, known and derived facts to multiply and divide mentally, including: - multiplying by 0 and 1; dividing by 1; - multiplying together three numbers Recognise and use factor pairs and commutativity in mental calculations Autumn 4 Spring 1	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (no prime) numbers Establish whether a number up to 100 is prime, recall prime numbers up to 19 Recognise and use square and cube numbers, and the notation for squared and cubed Autumn 3	Identify common factors, common multiples and prime numbers Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy Autumn 2

Multiplication and Division: Calculations							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Spring 2	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods Autumn 3 Spring 1	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout Spring 1	Multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method, include long X for 2-digit numbers Multiply and divide mentally drawing upon known facts Divide numbers up to 4 digits by a 1-digit number using formal written method of short division and interpret remainders appropriately for the context Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Autumn 3 Spring 1	Multiply numbers up to 4 digits by a 2-digit whole number using formal written method long multiplication Divide numbers up to 4 digits by a 2o-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 by a 2-digit number using formal written method short division, interpreting remainders according to the context Perform mental calculations with mixed operations, large numbers Autumn 2

Multiplication and Division: Problems							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Exploration of sharing and grouping - equal groups	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 Summer 1	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts Spring 2	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 Spring 1	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 Spring 1	Solve problems involving multiplication and division include use of knowledge of factors and multiples, squares and cubes Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates Autumn 3 Spring 1	Solve problems involving addition, subtraction, multiplication and division Use their knowledge of the order of operations to carry out calculations involving the four operations Autumn 2

Fractions: Recognise and Write							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	Recognise equal and unequal groups	Recognise, find and name a half as one of two equal parts of an object, shape or quantity Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity Summer 2	Recognise, find, name and write fractions ⅓ , ¼ , $^{2}/_{4}$, ¾ of a length, shape, set of objects or quantity Summer 1	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10 Recognise, find and write fractions of a discrete set of objects: unit and non unit fractions with small denominators Recognise and use fractions as numbers: unit and non-unit fractions with small denominators Spring 3	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten Spring 4 Summer 1	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, ⅖ + ⅘ = $^{6}/_{5}$ = 1 ⅕] Autumn 4	

Fractions: Compare							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			Recognise the equivalence of $^{2}/_{4}$ and ½ Summer 1	Recognise and show, using diagrams, equivalent fractions with small denominators Compare and order unit fractions, and fractions with the same denominators Spring 3	Recognise and show, using diagrams, families of common equivalent fractions Spring 4 Summer 1	Compare and order fractions whose denominators are all multiples of the same number Autumn 4	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Compare and order fractions, including fractions > 1 Autumn 3

Fractions: Calculations							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			Write simple fractions for example, ½ of 6 = 3 Summer 1	Add and subtract fractions with the same denominator within one whole [for example, $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$] Summer 1	Add and subtract fractions with the same denominator Spring 3	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 Autumn 4 Spring 2	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, ¼ × ½ = ⅛] Divide proper fractions by whole numbers [for example ⅓ ÷ 2 = ⅙] Autumn 3 Autumn 4

Fractions: Solve Problems							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
				Solve problems that involve all of the above Spring 3 Summer 1	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 Spring 3		

Decimals: Recognise, Write, Compare							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
					Recognise and write decimal equivalents of any number of tenths or hundredths Recognise, write decimal equivalents to ¼ ½ ¾ Round decimals with one decimal place to the nearest whole number Compare numbers with the same number of decimal places up to two decimal places Spring 4 Summer 1	Read and write decimal numbers as fractions [for example, 0.71 = 71/100] Recognise, use thousandths and relate them to tenths, hundredths and decimal equivalents Round decimals with two decimal places to the nearest whole number and to one decimal place Read, write, order and compare numbers with up to three decimal places Spring 3 Summer 3	Identify the value of each digit in numbers given to three decimal places Spring 3

Fractions, Decimals and Percentages							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
					Solve simple measure and money problems involving fractions and decimals to two decimal places Spring 3 Spring 4 Summer 1	Recognise the percent symbol (%) and understand that percent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal Solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅕, ⅖, ⅘ and those fractions with a denominator of a multiple of 10 or 25 Spring 3 Summer 3	Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, ⅜] Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts Spring 3 Spring 4

Ratio and Proportion							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
							Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts Solve problems involving the calculation/use of percentages for comparison Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples Spring 3

Measures: Using Measures							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Make comparisons between objects relating to size, length, weight and capacity	Compare length, weight and capacity	Compare, describe and solve practical problems for: - lengths and heights - mass/weight - capacity and volume - time Measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) Spring 4 and 5 Summer 6	Choose and use appropriate standard units to estimate and measure: - length and 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 = Spring 3 and 4	Measure, compare, add and subtract: - lengths (m/cm/mm); - mass (kg/g); - volume/capacity (l/ml) Spring 2 Spring 4	Convert between different units of measure [for example, kilometre to metre; hour to minute] Estimate, compare and calculate different measures Spring 2 Summer 3	Convert between different units of metric measure Understand and use approximate equivalences between metric units and common imperial units: inches, pounds, pints Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling Spring 4 Summer 5 and 6	Solve problems involving the calculation conversion of units of measure, using decimal notation up to 3 d.p. Use, read, write,convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 d.p. Convert between miles and kilometres Autumn 5

Measures: Money							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
		Recognise and know the value of different denominations of coins and notes Summer 5	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 Spring 1	Add and subtract amounts of money to give change, using both £ and p in practical contexts Summer 2	Estimate, compare and calculate different measures, including money in pounds and pence Summer 2	Use all four operations to solve problems involving measure [for example, money] Summer 3	

Measures: Time							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'	Describes a sequence of events, real or fictional, using words such as 'first', 'then...'	Sequence events in chronological order using language [e.g., before and after, next, first, today, yesterday, tomorrow, morning, afternoon, evening] Recognise, 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 Summer 6	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 Summer 2	Tell and write the time from an analogue clock, include: Roman numerals from I to XII, and 12-hour and 24-hour clocks Estimate, read time with more accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary (e.g. o'clock, a.m./p.m., morning, afternoon, noon and midnight) Know the number of seconds in a minute, the number of days in each month, year and leap year Compare durations of events [e.g., to calculate the time taken by particular events or tasks] Summer 3	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 Summer 3	Solve problems involving converting between units of time Summer 5	Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa Autumn 5

Measures: Perimeter, Area and Volume							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
				Measure the perimeter of simple 2-D shapes Spring 2	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares Autumn 3 Spring 2	Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate, compare the area of rectangles (including squares) and including using standard units, square cm (cm^2) and square m (m^2) and estimate the area of irregular shapes Estimate volume [e.g., using blocks to build cuboids] and capacity [e.g., using water] Spring 4 Summer 6	Recognise that shapes with the same areas can have different perimeters and vice versa Recognise when it is possible to use formulae for area, volume of shapes Calculate the area of parallelograms and triangles Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic cm (cm^3) and cubic m (m^3), extending to other units Spring 5

Geometry: 2-D Shapes							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Talk about and explore 2D (for example, circles, rectangles, triangles) using informal and mathematical language: 'sides', 'corners'; 'straight', 'round'	Select, rotate and manipulate shapes to develop spatial reasoning skills	Recognise and name common 2- D shapes [e.g., rectangles (including squares), circles and triangles] Autumn 3	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify 2-D shapes on the surface of 3-D shapes, [e.g., a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2-D shapes and everyday objects Autumn 3	Draw 2-D shapes Summer 4	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Identify lines of symmetry in 2-D shapes presented in different orientations Summer 4	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Use the properties of rectangles to deduce related facts and find missing lengths and angles Summer 1	Draw 2-D shapes using given dimensions and angles Compare and classify geometric shapes based on their properties and sizes Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Summer 1

Geometry: 3-D Shapes							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Talk about and explore 3D (for example, cuboids) using informal and mathematical language: 'sides', 'corners'; 'flat', 'round' Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc.	Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can	Recognise and name common 3- D shapes [for example, cuboids (including cubes), pyramids and spheres] Autumn 3	Recognise and name common 3- D shapes [for example, cuboids (including cubes), pyramids and spheres] Compare and sort common 3-D shapes and everyday objects Autumn 3	Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them Summer 4	Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes Identify lines of symmetry in 2-D shapes presented in different orientations Summer 4	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations Summer 1	Recognise, describe and build simple 3-D shapes, including making nets Summer 1

Geometry: Angles and Lines							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
				Recognise angles as a property of shape or a description of a turn Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle Identify horizontal and vertical lines and pairs of perpendicular and parallel lines Summer 4	Identify acute and obtuse angles and compare and order angles up to two right angles by size • identify lines of symmetry in 2-D shapes presented in different orientations • complete a simple symmetric figure with respect to a specific line of symmetry Summer 4	Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles Draw given angles, and measure them in degrees Identify: - angles at a point and a whole turn (total 360°) - angles at a point on a straight line and ½ a turn (total 180°) - other multiples of 90° Summer 2	Find unknown angles in any triangles, quadrilaterals, and regular polygons Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles Summer 1

Geometry: Position and Direction							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Understand position through words alone Describe a familiar route Discuss routes and locations Use informal language like 'in front of' and 'behind'	Understand position through words alone Describe a familiar route Discuss routes and locations Use informal language like 'in front of' and 'behind'	Describe position, direction and movement, including whole, half, quarter and three-quarter turns Summer 3	Order, arrange combinations of mathematical objects in patterns and sequences Use mathematical vocabulary to describe position, direction, movement, include in a straight line and distinguishing between rotation as a turn and right angles for quarter, half and three-quarter turns (clockwise and anticlockwise) Summer 4		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 Summer 6	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 Summer 2	Describe positions on the full coordinate grid (all four quadrants) Draw and translate simple shapes on the coordinate plane, and reflect them in the axes Summer 2

Statistics: Present and Interpret Data							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Summer 3	Interpret and present data using bar charts, pictograms and tables Summer 5	Interpret, present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs Summer 5	Complete, read and interpret information in tables, including timetables Spring 5	Interpret and construct pie charts and line graphs and use these to solve problems Spring 6

Statistics: Solve Statistical Problems							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
			Ask, answer simple questions by counting the number of objects in each category and sorting categories by quantity Ask, answer questions about totalling and comparing categorical data Summer 3	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 Summer 5	Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs Summer 5	Solve comparison, sum and difference problems using information presented in a line graph Spring 5	Calculate and interpret the mean as an average Spring 6

Algebra NOTE: although algebraic notation is introduced in Year 6, algebraic thinking starts earlier as exemplified by the 'missing number' objectives from Years 1, 2 and 3.							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
		Solve one-step problems that involve + and - , using concrete objects and pictorial representations, and missing number problems such as 7 = ___ – 9	*Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems*	*Solve problems, including missing number problems*			Use simple formulae Generate, describe linear number sequences Express missing number problems algebraically Find pairs of numbers that satisfy an equation with two unknowns Enumerate possibilities of combinations of two variables Spring 6