Whole School Maths Progression Map

EYFS – Early Learning Goals (ELG)

Place Value								
	EYFS		KS1		KS2			
	3-4 year olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value: Counting	• develop fast recognition of up to 3 objects, without having to count them individually ('subsidising') • 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 principal') **Autumn 2** **Spring 1**	• count objects, actions and sounds, up to 10 • subitise with patterns, 5 and 10 frames, dots on dice, fingers, etc (up to 10) • count beyond ten • have a deep understanding of number to 10, including the composition of each number • subitise (recognise quantities without counting) up to 5 • 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** **Autumn 4** **Spring 2** **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**	• count forwards and 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**	

Place Value

	EYFS		KS1		KS2			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Place Value: Represent	• show 'finger numbers' up to 5 • experiment with their own symbols and marks as well as numerals • link numerals and amounts [for example, showing the right number of objects to match the numeral, up to 5] Experiment with their own symbols and marks as well as numerals.	• link the number symbol (numeral) with its cardinal number value, up to 10 Explore the composition of numbers to 10.	• 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** **Autumn 4** **Spring 2** **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**	• read and write numbers to at least 1000 in numerals and in words • identify, represent and estimate numbers using different representations **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 to at least 10,000,000 and determine the value of each digit **Autumn 1**
Place Value: Use PV and Compare	• compare quantities using language: 'more than', 'fewer than' **Summer 1**	• compare numbers using vocabulary: 'more than', 'less than', 'fewer', 'the same as', 'equal to' • understand the 'one more than/one less than' relationship between consecutive numbers • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less	• given a number, identify one more and one less **Autumn 1** **Autumn 4** **Spring 2**	• recognise the place value of each digit in a two-digit number • 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, 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 to at least 10,000,000 and determine the value of each digit **Autumn 1**

		than or the same as the other quantity	**Summer 4**					

Place Value

	EYFS		KS1		KS2			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Place Value: Problem & Rounding	Solve real world mathematical problems with numbers up to 5.	• solve real world mathematical problems with numbers up to 10		• 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 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 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 & Subtraction

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Recall, Represent, Use		• explore the composition of numbers to 10 • automatically recall number bonds for numbers 0–10 • 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	• read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 **Autumn 2** **Spring 1**	• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • show the addition of two numbers can be done in any order (commutative) and subtraction of one 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 **Autumn 2**	• estimate the answer to the calculation and use inverse operations to check answers **Autumn 2**	• estimate and use inverse operations to check answers to a calculation **Autumn 2**	• use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy **Autumn 2**	

Addition & Subtraction

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Calculations		*explore the composition of numbers to 10 • automatically recall number bonds for numbers 0–10 • 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 1**	• 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 **Autumn 2**	• add and subtract numbers mentally, including: ➢ a three-digit number and ones ➢ a three-digit number and tens ➢ a three-digit number and hundreds • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction **Autumn 2**	• add and subtract numbers with up to 4 digits using 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 & Subtraction

	EYFS		KS1		KS2			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Addition & Subtraction: Solve Problems	• solve real world mathematical problems with numbers up to 5 **Spring 1 and 2**	• solve real world mathematical problems with numbers up to 10	• 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 1**	• 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 **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 addition and subtraction multi-step problems and contexts, deciding which operations and methods to use and why • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equal sign **Autumn 2**	• solve addition and subtraction multi-step problems and contexts, deciding which operations and methods to use and why **Autumn 2**

Multiplication & Division

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & Division: Recall, Represent, Use		• explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally	• count in 2s, 5s and 10s up to 100 **Spring 2** **Summer 1**	• 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 any other cannot **Autumn 4** **Spring 1**	• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables **Autumn 3**	• recall multiplication and division facts for multiplication tables up to 12 x 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 numbers, and common factors of two 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 • recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}) **Autumn 4**	• 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 4**

Multiplication & Division

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & Division: Calculations				• calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs **Autumn 4 Spring 1**	• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including two-digit numbers times one-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	• 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 1000 **Autumn 4 Spring 1 Summer 1**	• 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 four 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 **Autumn 2**

						Spring 1		

Multiplication & Division								
	EYFS		**KS1**		**KS2**			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Multiplication & Division: Solve Problems			• 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 using multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts **Spring 1**	• 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 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 including using their 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 **Autumn 2**
Multiplication & Division: Combined							• solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equal sign	• use their knowledge of the order of operations to carry out calculations involving the four operations

Operations							**Spring 1**	**Autumn 2**

Fractions, Decimals & Percentages

	EYFS		KS1		KS2			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Fractions: Recognise and Write			• 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 $^{1}/_{3}$, ¼, $^{2}/_{4}$ and 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 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 **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 3**	• identify, name and write equivalent fractions of a give fraction, represented visually, including tenths and hundredths • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example, $^{2}/_{5}$ + $^{4}/_{5}$ = $^{6}/_{5}$ = 1 $^{1}/_{5}$] **Autumn 4**	
Fractions: Compare				• recognise the equivalence of $^{2}/_{4}$ and ½	• recognise and show, using diagrams, equivalent fractions with small denominators • compare and order unit fractions, and	• recognise and show, using diagrams, families of common equivalent fractions	• compare and order fractions whose denominators are all multiples of the same number	• use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions,

				Summer 1	fractions with the same denominators **Summer 1**	**Spring 3**	**Spring 2**	including fractions >1 **Autumn 3**

Fractions, Decimals & Percentages

	EYFS		KS1		KS2			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Fractions: Calculations				• 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 **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 x ½ = $^1/_8$] • divide proper fractions by whole numbers [for example, $^1/_3 \div 2 = ^1/_6$] **Autumn 3**
Fractions: Solve Probl					• solve problems that involve all of the above	• solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where		

ems					**Spring 5 Summer 1**	the answer is a whole number **Spring 3**		

Fractions, Decimals & Percentages								
	EYFS		**KS1**		**KS2**			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Decimals: Recognise and Write						• recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to ¼, ½, ¾ **Spring 4 Summer 1**	• read and write decimal numbers as fractions [for example, 0.71 = $^{71}/_{100}$] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents **Spring 3**	• identify the value of each digit in numbers given to three decimal places **Spring 3**
Decimals: Compare						• 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 **Summer 1**	• 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**	

Fractions, Decimals & Percentages

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals: Calculations and Problems						• find the effect of dividing a one- of two-digit number by 10 and 100, identifying the value of digits in the answer as ones, tenths and hundredths **Spring 4**	• solve problems involving number up to three decimal places **Summer 1**	• multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • multiply one-digit numbers with up to two decimal places by whole numbers • use written division methods in cases where the answer has up to two decimal places • solve problems which require answers to be rounded to specified degrees of accuracy **Spring 1**

Fractions, Decimals & Percentages

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions, Decimals and Percentages						• 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, $^{1}/_{5}$, $^{2}/_{5}$, $^{4}/_{5}$ and those fractions with a denominator of a multiple of 10 or 25 **Spring 3**	• associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $^{3}/_{8}$] • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts **Spring 3** **Spring 4**

Ratio & Proportion

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Ratio and Proportion								• solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • solve problems involving the calculation of percentages [for example, of measures, and such as 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 **Spring 1**

Algebra

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra			• solve one-step problems that involve addition and subtraction, 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 and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables **Spring 3**

Note – although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/3

Measurement

	EYFS		KS1		KS2			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Measurement: Using Measures	• make comparisons between objects relating to size, length, weight and capacity	• compare length, weight and capacity by making predictions and using vocabulary 'than' [for example, "This is heavier than that."]	• compare, describe and solve practical problems for: ➢ lengths and heights [long/short, longer/shorter, tall/short, double/half] ➢ mass/weight [for example, heavy/light, heavier/lighter, 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) **Spring 4** **Spring 5**	• 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 = **Spring 3** **Summer 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 (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 • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling **Spring 4** **Summer 4** **Summer 5**	• solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • convert between miles and kilometres **Autumn 5**

			Summer 6					

Measurement								
	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Money			• 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 changes, 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**	

Measurement

	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Time	• begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'		• 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	• 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	• 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, a.m./p.m., morning, afternoon, noon and midnight • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events [for example to calculate the time	• 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	• solve problems involving converting between units of time	• 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

			Summer 6	**Summer 2**	taken by particular events or tasks] **Summer 3**	**Summer 3**	**Summer 5**	**Y5 Summer 5**

Measurement								
	EYFS		**KS1**		**KS2**			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Measurement: Perimeter, Area, Volume					• 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**	• measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (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] **Spring 4**	• 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] **Spring 5**

						Spring 2	**Summer 6**	

Geometry								
	EYFS		**KS1**		**KS2**			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Geometry: 2-D Shapes	• talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.	• select, rotate and manipulate shapes in order to develop spatial reasoning skills • compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can	• recognise and name common 2-D shapes [for example, 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, [for example, 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 5**	• 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:	• select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.	• select, rotate and manipulate shapes in order to develop spatial reasoning skills	• recognise and name common 3-D shapes [for example, cuboids (including cubes),	• recognise and name common 3-D shapes [for example, cuboids (including cubes),	• make 3-D shapes using modelling materials; recognise 3-D shapes in		• identify 3-D shapes, including cubes and other cuboids, from 2-D representations	• recognise, describe and build simple 3-D shapes, including making nets

3-D Shapes	• combine shapes to make new ones - an arch, a bigger triangle etc.		pyramids and spheres] **Autumn 3**	pyramids and spheres] • compare and sort common 3-D shapes and everyday objects **Autumn 3**	different orientations and describe them **Summer 4**		**Summer 1**	**Summer 1**

Geometry								
	EYFS		**KS1**		**KS2**			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Geometry: Angles & Lines					• recognise angles as a property of shape of 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 measure in degrees: estimate and compare acute, obtuse and reflex angles • draw given angles, and measure them in degrees • identify: ➢ angles at a point and one whole turn (total 360^{o}) ➢ angles at a point on a straight line and ½ a turn (total 180^{o}) ➢ other multiples of 90^{o} **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								
	EYFS		KS1		KS2			
	3-4 years olds	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: Position & Direction	• understand position through words alone – for example, “The bag is under the table,” – with no pointing • describe a familiar route • discuss routes and locations, using words like ‘in front of’ and ‘behind’ • talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’ etc. • extend and create ABAB	• continue, copy and create repeating patterns [including AB, ABB and ABBC]	• 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 four quadrants) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes

	patterns – stick, leaf, stick, leaf • notice and correct an error in a repeating pattern. **Autumn 2** **Summer 2**		**Summer 3**	**Summer 4**		**Summer 6**	**Summer 2**	**Summer 2**

Statistics								
	EYFS		**KS1**		**KS2**			
	3-4 years olds	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Statistics: Present & Interpret				• 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 and 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 Probl				• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • ask and answer questions about totalling and	• 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 different 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 and interpret the mean as an average

ems				comparing categorical data **Summer 3**	**Summer 5**	**Summer 5**	**Spring 5**	**Spring 6**