

Maths skills and knowledge progression Map: EYFS-Y6 (White Rose Long term overviews)

Place Value

Number and place value	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance Teacher Assessment Framework		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Counting	<p>To recite numbers in order to 10.</p> <p>To realise not only objects, but anything can be counted including steps, claps or jumps.</p> <p>To count up to three or four objects by saying one number name for each item.</p> <p>To count out up to six objects from a larger group.</p> <p>To count actions or objects which cannot be moved.</p> <p>To count objects to 10 and beginning to count beyond 10.</p> <p>To count an irregular arrangement of up to ten objects.</p> <p>To estimate how many objects they can see and check by counting them.</p> <p>To count reliably with numbers from one to 20.</p> <p>Autumn 1 Autumn 2 Spring 1 Summer 1</p>	<p>To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <p>Count numbers to 100 in numerals; count in multiples of 2s, 5s and 10s</p> <p>Autumn 1 Autumn 2 Spring 1 Summer 1 Summer 2</p>	<p>To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.</p> <p>Autumn 1</p>	<p>To count from 0 in multiples of 4, 8, 50 and 100. Find 10 or 100 more or less than a given number</p> <p>Autumn 1 Autumn 2 Spring 1</p>	<p>To count in multiples of 6, 7, 9, 25 and 1000.</p> <p>To count backwards through zero to include negative numbers.</p> <p>Autumn 1/2</p>	<p>To count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.</p> <p>Count forwards and backwards with positive and negative whole numbers, including through zero.</p> <p>Autumn 1</p>	

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Problems and rounding	To show curiosity about numbers by offering comments or asking questions		Use place value and numbers to solve problems	Solve number problems and practical problems involving these ideas	Round any number to the nearest 10, 100 or 1000	Interpret negative numbers in context	Round any whole number to a required degree of accuracy
	To show an interest in number problems				Solve number and practical problems that involve all of the above and with increasingly large numbers	Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000	Use negative numbers in context, and calculate intervals across zero
	To being to identify own mathematical problems based on own interest and fascination		Autumn 1	Autumn 1	Autumn 1	Solve number problems and practical problems that involve all of the above	Solve number and practical problems that involve all of the above
						Autumn 1	Autumn 1

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Place value: Represent	<p>To say the number that is one more than a given number.</p> <p>To find one more or one less from a group of up to five objects, then ten objects.</p> <p>To say which number is one more or one less than a given number from one to 20.</p> <p>Autumn 1 Autumn 2 Spring 1 Summer 1</p>	<p>Identify and represent numbers using objects and pictorial representations</p> <p>Read and write numbers to 100 in numerals</p> <p>Read and write numbers from 1 to 20 in numeral and words</p> <p>Autumn 1 Autumn 2 Spring 1 Summer 1 Summer 2</p>	<p>Read and write numbers to at least 100 in numerals and words</p> <p>Identify, represent and estimate numbers using different representations, including the number line</p> <p>Autumn 1</p>	<p>To read and write numbers up to 1000 in numerals and in words.</p> <p>Identify, represent and estimate numbers using different representations</p> <p>Autumn 1</p>	<p>Identify, represent and estimate numbers using different representations</p> <p>Autumn 1</p>	<p>Read, write, (order and compare) numbers to at least 1000000 and determine the value of each digit</p> <p>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals</p> <p>Autumn 1</p>	<p>Read, write, (order and compare) numbers to at least 10000000 and determine the value of each digit</p> <p>Autumn 1</p>

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Use place value and compare	<p>To compare two groups of objects, saying when they have the same number.</p> <p>To use the language of 'more' and 'fewer' to compare two sets of objects.</p> <p>To place numbers one to 20 in order.</p> <p>Autumn 1 Autumn 2 Spring 1 Summer 1</p>	<p>Given a number find one more or less</p> <p>Autumn 1 Autumn 2 Spring 1 Summer 2</p>	<p>Recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>Compare and order numbers from 0 up to 100; use <, > and = signs</p> <p>Autumn 1</p>	<p>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>Compare and order numbers to 1000</p> <p>Autumn 1</p>	<p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones)</p> <p>Order and compare numbers beyond 1000</p> <p>Autumn 1</p>	<p>Read, write, order and compare numbers to at least 1000000 and determine the value of each digit</p> <p>Autumn 1</p>	<p>Read, write, order and compare numbers to at least 10000000 and determine the value of each digit</p> <p>Autumn 1</p>

Addition and subtraction

Addition and subtraction	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance Teacher Assessment Framework		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recall, Represent, Use	To begin to use the vocabulary involved in adding and subtracting in practical activities and discussion.	Read write and interpret mathematical statements involving additions, subtraction and equals signs Represent and use number bonds and related subtraction facts within 20 Autumn 1/2 Spring 1	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts to 100 Show that 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 To recall all numbers bonds to and within 10 and use these to reason with and calculate bonds within 20, recognising other associated additive relationships Autumn 1	Estimate the answer to a calculation and use inverse operations to check answers Autumn 1/2	Estimate and use inverse operations to check answers to a calculation Autumn 1	Use rounding to check answers to calculations and determine, in the context of a problem, level of accuracy Autumn 1	

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Calculations	<p>To find the total of items in two groups by counting all of them</p> <p>To add and subtract two single-digit numbers and count on and back to find the answer using quantities and objects</p> <p>To say which number is one more or one less than a given number from one to 20.</p> <p>Autumn 1</p> <p>Autumn 2</p> <p>Spring 1</p> <p>Summer 1</p>	<p>Add and subtract one-digit and two-digit numbers to 20 including zero</p> <p>Autumn 1/2 Spring 1</p>	<p>Add and subtract numbers using an efficient strategy explaining their method verbally, in pictures or using apparatus mentally, including</p> <ul style="list-style-type: none"> - A two-digit numbers - A two-digit number and tens - Two two-digit numbers - Adding three one-digit numbers <p>Autumn 1/2</p>	<p>Add and subtract numbers mentally including:</p> <ul style="list-style-type: none"> - A three digit numbers and ones - A three-digit number and tens - A three-digit number and hundreds <p>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p> <p>Autumn 1/2</p>	<p>Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</p> <p>Autumn 1</p>	<p>Add and subtract whole numbers with more than 4-digits including formal written methods (columnar addition and subtraction)</p> <p>Add and subtract numbers mentally with increasingly large numbers</p> <p>Autumn 1</p>	<p>Perform mental calculations, including with mixed operations and large numbers</p> <p>Use their knowledge of the order of operation to carry out calculations involving the four operations</p> <p>Autumn 1</p>

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Solve problems	To solve problems, including doubling, halving and sharing. Summer 2	Solve problems that involve addition and subtraction, using concrete objects and pictorial representation, and missing number problems such as $7 = _ - 9$ Autumn 1/2 Spring 1	Solve problems with addition and subtraction: - Using concrete objects and pictorial representations involving numbers, quantities and measures - Applying their increasing knowledge of mental and written methods Autumn 1/2	Solve problems including missing number problems using number facts, place value, and more complex addition and subtraction Autumn 1/2	Solve addition and subtraction two-step problems in different contexts deciding which operations and methods to use and why Autumn 1/2	Solve addition and subtraction multi-step problems in different 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 equals sign Autumn 1	Solve addition and subtraction multi-step problems in different contexts, deciding which operations and methods to use and why Autumn 1

Multiplication and division

Multiplication and division	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance Teacher Assessment Framework		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recall, represent, use			<p>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables including recognising odd and even numbers and use them to solve simple problems, demonstrating an understanding of commutativity as necessary</p> <p>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>Autumn 2/ Spring 1</p>	<p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>Autumn 2 Spring 1</p>	<p>Recall and use multiplication and division facts for multiplication tables up to 12 x 12</p> <p>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</p> <p>Recognise and use factor pairs and commutativity in mental calculations</p> <p>Autumn 1 Spring 1</p>	<p>Identify multiples and factors, including factor pairs of a number and common factors of two numbers</p> <p>Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers</p> <p>Establish whether a number up to 100 is prime and recall prime numbers up to 19</p> <p>Recognise and use square numbers and cube numbers, and the notion of squared and cubed</p> <p>Autumn 1</p>	<p>Identify common factors, common multiples and prime factors</p> <p>Use estimation and check answers to calculation and determine, in the context of a problem, an appropriate degree of accuracy</p> <p>Autumn 2</p>

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Calculations			<p>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division and equals signs</p> <p>Autumn 2/ Spring 1</p>	<p>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</p> <p>Autumn 2 Spring 1</p>	<p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout</p> <p>Spring 1</p>	<p>To multiply numbers up to four digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers fluently.</p> <p>Multiply and divide mentally drawing upon known facts</p> <p>To divide numbers up to four digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context fluently.</p> <p>To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.</p> <p>Autumn 2 Spring 1 Summer 1</p>	<p>To multiply multi-digit numbers up to four digits by a two-digit whole number using the formal written method of long multiplication.</p> <p>To divide numbers up to four digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole numbers, fractions, or by rounding, as appropriate for the context.</p> <p>To 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.</p> <p>Perform mental calculations, including with mixed operation and large numbers</p> <p>Autumn 2</p>

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Solve problems		To 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	To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts Autumn 2/ Spring 1	To solve simple problems in different contexts, deciding which of the four operations to use and why. These include missing number problems, involving multiplication and division, including measuring and positive integer scaling problems and correspondence problems in which n objects are connected to m objects. Autumn 2 Spring 1	To solve two-step problems in different contexts 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	To solve problems involving multiplication and division using their knowledge of factors and multiples, squares and cubes. To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. Autumn 2 Spring 1	To solve problems involving addition, subtraction, multiplication and division. Autumn 1
Combined operations						To solve problems, including in missing number problems, involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign (to indicate equivalence). Autumn 1 Spring 1	To use their knowledge of the order of operation to carry out calculations involving the four operations Autumn 1

Fractions, decimals and percentages

Fractions	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions: Recognise and write		<p>To recognise, find and name a half as one of two equal parts of an object, shape or quantity</p> <p>To recognise, find and name a quarter as one of four equal parts of an object, shape or quantity</p> <p style="text-align: right;">Summer 1</p>	<p>To recognise, find, name, identify and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ of a length, number, shape, set of objects or quantity and know that all parts must be equal parts of the whole</p> <p style="text-align: right;">Spring 2</p>	<p>To 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 ten.</p> <p>To recognise, <i>understand</i> and use fractions as numbers: unit fractions and non-unit fractions with small denominators</p> <p>To recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.</p> <p style="text-align: right;">Spring 2 Summer 1</p>	<p>To count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.</p> <p style="text-align: right;">Spring 1/2</p>	<p>To identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</p> <p>To 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 $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$</p> <p style="text-align: right;">Spring 1/2</p>	
Fractions: Compare			<p>To recognise the equivalence of $2/4$ and $1/2$</p> <p style="text-align: right;">Spring 2</p>	<p>To recognise and show, using diagrams, equivalent fractions with small denominators.</p> <p>To compare and order unit fractions, and fractions with the same denominators.</p> <p style="text-align: right;">Spring 2 Summer 1</p>	<p>To recognise and show, using diagrams, families of common equivalent fractions.</p> <p style="text-align: right;">Spring 1/2</p>	<p>To compare and order fractions whose denominators are all multiples of the same number.</p> <p style="text-align: right;">Spring 1/2</p>	<p>To compare and order fractions, including fractions > 1. To use common factors to simplify fractions; use common multiples to express fractions in the same denomination.</p> <p style="text-align: right;">Autumn 2</p>

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Fractions: Calculations			To write simple fractions for example, $\frac{1}{2}$ of 6 = 3 Spring 2	To add and subtract fractions with the same denominator within one whole Spring 2 Summer 1	To add and subtract fractions with the same denominator Spring 2	To add and subtract fractions with the same denominator and denominators that are multiples of the same number To multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. . Spring 1/2	To add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions To multiply simple pairs of proper fractions, writing the answer in its simplest form To divide proper fractions by whole numbers. Autumn 2
Fractions: solve problems				To solve problems that involve all of the above. Spring 2 Summer 1	To 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 1/2		

Decimals	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance Teacher Assessment Framework		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals: Recognise and write					<p>To recognise and write decimal equivalents of any number of tenths or hundredths.</p> <p>To recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$.</p> <p>Spring 2</p>	<p>To read and write decimal numbers as fractions.</p> <p>To recognise and use thousandths and relate them to tenths, hundredths, decimal equivalents</p> <p>Spring 2/Summer 1</p>	<p>To identify the value of each digit in numbers given to three decimal places</p> <p>Spring 1</p>
Decimals: Compare					<p>To round decimals with one decimal place to the nearest whole number.</p> <p>To compare numbers, amounts and quantities with the same number of decimal places up to two decimal places.</p> <p>Summer 1</p>	<p>To round decimals with two decimal places to the nearest whole number and to one decimal place</p> <p>To read, say, write, order and compare numbers with up to three decimal places.</p> <p>Spring 2/Summer 1</p>	

Decimals: Calculations and problems					To 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. Spring 2	To solve problems involving numbers up to three decimal places. Summer 1	To multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places. To use written division methods in cases where the answer has up to two decimal places To multiply one-digit numbers with up to two decimal places by whole numbers . To solve problems which require answers to be rounded to specified degrees of accuracy Spring 1
	Fractions, decimals and percentages	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance Teacher Assessment Framework	KS2 Statutory Curriculum Guidance			
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Fractions, decimals and percentages					To solve simple measure and money problems involving fractions and decimals to two decimal places Spring 1 Spring 2 Summer 1	To recognise the per cent symbol (%) and understand that per cent relates to ‘number of parts per hundred’, and write percentages as a fraction with denominator 100, and as a decimal. To solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25. Spring 2/Summer 1	To associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Autumn 2 Spring 1

Ratio and proportion							<p>To solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.</p> <p>To solve problems involving the calculation of percentages and the use of percentages.</p> <p>To solve problems involving similar shapes where the scale factor is known or can be found.</p> <p>To solve problems involving unequal <i>quantities</i>, sharing and grouping using knowledge of fractions and multiples.</p> <p>Spring 2</p>
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Algebra	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance Teacher Assessment Framework		KS2 Statutory Curriculum Guidance			
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Algebra		<p>To Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \underline{\quad} - 9$</p> <p>Autumn 2</p>	<p>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems</p> <p>Spring 1/2</p>	<p>Solve problems including missing number problems</p> <p>Autumn 1/2</p>			<p>To use simple formulae.</p> <p>To generate and describe linear number sequences.</p> <p>To express missing number problems algebraically.</p> <p>To find pairs of numbers that satisfy an equation with two unknowns.</p> <p>To enumerate possibilities of combinations of two variables.</p> <p>Spring 1</p>

Algebraic thinking starts in Y1/2/3 in the form of missing numbers problems but the language associated with algebra is not introduced until Y6

Measurement

Measurement	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance <i>Teacher Assessment Framework</i>		KS2 Statutory Curriculum Guidance			
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Using Measures	<p>To order two or three items by length or height.</p> <p>To order two items by weight or capacity.</p> <p>To use everyday languages to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and solve problems.</p> <p>Autumn 1 Summer 2</p>	<p>To compare, describe and solve practical problems for:</p> <ul style="list-style-type: none"> - lengths and heights, - mass/weight, - capacity and volume, - time. <p>To measure and begin to record the following:</p> <ul style="list-style-type: none"> - lengths and heights - mass/weight, - capacity and volume - time. <p>Spring 2 Summer 2</p>	<p>To 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.</p> <p>To compare and order lengths, mass, volume/capacity and record the results using >, < and =.</p> <p><i>Read scales in divisions of ones, twos, fives and tens</i></p> <p>Spring 2 Summer 1 Summer 2</p>	<p>To measure, compare, add and subtract <i>using mixed units</i>: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).</p> <p>Spring 1/2 Summer 2</p>	<p>To estimate, compare and calculate different measures</p> <p>To convert between different units of measure (for instance metres to kilometres and minutes to hours)</p> <p>Autumn 2 Summer 1</p>	<p>To convert between different units of metric measure.</p> <p>To understand and use approximate equivalences between metric units and common imperial units.</p> <p>To use all four operations to solve problems involving measure using decimal notation, including <i>scaling and conversions</i>.</p> <p>Summer 2</p>	<p>To solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate</p> <p>To 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.</p> <p>To convert between miles and kilometres.</p> <p>Spring 1</p>

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Time	<p>To use everyday language related to time.</p> <p>To order and sequence familiar events.</p> <p>To measure short periods of time in simple ways.</p> <p>Autumn 2</p>	<p>To sequence events in chronological order using language.</p> <p>To recognise and use language relating to dates, including days of the week, weeks, months and years.</p> <p>To tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.</p> <p>Summer 2</p>	<p>To read, tell and write the time to five minutes, including quarter past/to the hour/half hour and draw the hands on a clock face to show these times.</p> <p>To know the number of minutes in an hour and the number of hours in a day.</p> <p>To compare and sequence intervals of time.</p> <p>Summer 1</p>	<p>To tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks.</p> <p>To estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours.</p> <p>To know the number of seconds in a minute and the number of days in each month, year and leap year.</p> <p>To compare durations of events.</p> <p>Summer 1</p>	<p>To read, write and convert time between analogue and digital 12- and 24-hour clocks.</p> <p>To solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</p> <p>Summer 1</p>	<p>To solve problems involving converting between units of time.</p> <p>Summer 2</p>	<p>To 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</p> <p>Spring 1</p>

Geometry

Geometry	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance Teacher Assessment Framework		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: 2-D Shapes	<p>To show an interest in shape and space by playing with shapes or making arrangements with objects.</p> <p>To show interest in shape by sustained construction activity or by talking about shapes or arrangements.</p> <p>To show interest in shapes in the environment.</p> <p>To use shapes appropriately for tasks.</p> <p>To begin to talk about shapes in everyday objects, e.g. 'round' and 'tall'.</p> <p>To begin to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes.</p>	<p>To recognise, <i>handle</i> and name common 2D shapes (for example rectangles (including squares), circles and triangles)</p> <p>Autumn 2</p>	<p>To identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line</p> <p>To identify 2D shapes on the surface of 3D shapes.</p> <p>To compare and sort common 2D and 3D shapes and everyday objects</p> <p>Spring 1/2</p>	<p>To draw 2D shapes</p> <p>Summer 1</p>	<p>To compare and classify geometric shapes, including <i>different</i> quadrilaterals and triangles, based on their properties and sizes.</p> <p>To identify lines of symmetry in 2-D shapes presented in different orientations</p> <p>Summer 2</p>	<p>To distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p> <p>To use the properties of rectangles to deduce related facts and find missing lengths and angles</p> <p>Summer 1</p>	<p>To illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.</p> <p>To compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</p> <p>To draw 2D shapes using given dimensions and angles</p> <p>Summer1</p>
Geometry: 3-D Shapes	<p>To select a particular named shapes.</p> <p>To explore characteristics of everyday objects and shapes and use mathematical language to describe them</p> <p>Spring 2</p>	<p>To recognise, <i>handle</i> and name common 3D (for example, cuboids (including cubes), pyramids and spheres</p> <p>Autumn 2</p>	<p>To compare and sort common 2D and 3D shapes and everyday objects</p> <p>To, identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.</p> <p>Spring 1/2</p>	<p>To draw 2D shapes and make 3D shapes using modelling materials.</p> <p>Summer 1</p>		<p>To identify 3D shapes, including cubes and other cuboids, from 2D representations.</p> <p>Summer 1</p>	<p>To recognise, describe and build simple 3D shapes, including making nets.</p> <p>Summer 1</p>

Geometry	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: Angles and Lines				<p>To recognise angles as a property of shape or a description of a turn.</p> <p>To identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn</p> <p>To identify whether angles are greater than or less than a right angle.</p> <p>Summer 1</p>	<p>To identify acute and obtuse angles and compare and order angles up to two right angles by size <i>in preparation for using a protractor</i>.</p> <p>To complete a simple symmetric figure with respect to a specific line of symmetry.</p> <p>To identify lines of symmetry in 2D shapes presented in different orientations.</p> <p>Summer 2</p>	<p>To know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles. To draw given angles, and measure them in degrees.</p> <p>To identify:</p> <ul style="list-style-type: none"> - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) - Other multiples of 90°. <p>Summer 1</p>	<p>To recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</p> <p>Summer 1</p>

Geometry	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: Position and direction	<p>To use positional language.</p> <p>To describe their relative position such as 'behind' or 'next to'.</p> <p>To use familiar objects and common shapes to create and recreate patterns and build models.</p> <p>To recognise, create and describe patterns</p> <p>Spring 2 Summer 2</p>	<p>To describe position, direction and movement, including whole, half, quarter and three-quarter turns</p> <p>Summer 1</p>	<p>To 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 anticlockwise).</p> <p>To order and arrange combinations of mathematical objects and <i>shapes</i>, including those in different orientations, in patterns and sequences.</p> <p>Spring 1 Summer 1</p>		<p>To describe positions on a 2D grid as coordinates in the first quadrant.</p> <p>To plot specified points and draw sides to complete a given polygon.</p> <p>To describe movements between positions as translations of a given unit to the left/right and up/down.</p> <p>Summer 2</p>	<p>To 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.</p> <p>Summer 2</p>	<p>To draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</p> <p>To describe positions on the full coordinate grid (all four quadrants)</p> <p>Autumn 2</p>

Statistics

Statistics	EYFS (30 - 50mths to ELGs)	KS1 Statutory Curriculum Guidance <i>Teacher Assessment Framework</i>		KS2 Statutory Curriculum Guidance			
	30 – 50 months 40 – 60 months Early Learning Goal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Record, present and interpret data	To record, using marks that they can interpret and explain		To interpret and construct simple pictograms, tally charts, block diagrams and simple tables (<i>e.g. many-to-one correspondence in pictograms with simple ratios 2, 5, 10 scales</i>). Spring 1	To interpret and present data using bar charts, pictograms and tables <i>and use simple scales with increasing accuracy</i> . Autumn 2	To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Summer 1	To complete, read and interpret information in tables, including timetables. Autumn 1	To interpret and construct pie charts and line graphs (<i>relating to two variables</i>) and use these to solve problems. Summer 1
Solve problems			To ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. To ask and answer questions about totalling and comparing categorical data. Spring 1	To solve one-step and two-step questions using information presented in scaled bar charts, pictograms and tables. Autumn 2	To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. Summer 1	To solve comparison, sum and difference problems using information presented in a line graph. Autumn 1	To calculate and interpret the mean as an average. Spring 2