

Progression In Maths

Number – number and place value

EYFS	<p>16-26 mths</p> <ul style="list-style-type: none"> Knows that things exist, even when out of sight. Beginning to organise and categorise objects, e.g. putting all the teddy bears together or teddies and cars in separate piles. Says some counting words randomly <p>22-36 mths</p> <ul style="list-style-type: none"> Selects a small number of objects from a group when asked, for example, 'please give me one', 'please give me two'. Recites some number names in sequence. Creates and experiments with symbols and marks representing ideas of number. Begins to make comparisons between quantities. Uses some language of quantities, such as 'more' and 'a lot'. <p>30-50 mths</p> <ul style="list-style-type: none"> Uses some number names and number language spontaneously. Uses some number names accurately in play. Recites numbers in order to 10. Knows that numbers identify how many objects are in a set. Beginning to represent numbers using fingers, marks on paper or pictures. Sometimes matches numeral and quantity correctly. Shows curiosity about numbers by offering comments or asking questions. Compares two groups of objects, saying when they have the same number. Shows an interest in number problems. Shows an interest in numerals in the environment. Shows an interest in representing numbers. Realises not only objects, but anything can be counted, including steps, claps or jumps. <p>40-60 mths</p> <ul style="list-style-type: none"> Recognise some numerals of personal significance. Recognises numerals 1 to 5. Counts up to three or four objects by saying one number name for each item. Counts actions or objects which cannot be moved. Counts objects to 10, and beginning to count beyond 10. Counts out up to six objects from a larger group. Selects the correct numeral to represent 1 to 5, then 1 to 10 objects. Counts an irregular arrangement of up to ten objects. Estimates how many objects they can see and checks by counting them. Uses the language of 'more' and 'fewer' to compare two sets of objects. Says the number that is one more than a given number. Finds one more or one less from a group of up to five objects, then ten objects. Records, using marks that they can interpret and explain. Begins to identify own mathematical problems based on own interests and fascinations. <p>ELG</p> <ul style="list-style-type: none"> Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number.
Y1	<ul style="list-style-type: none"> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number (Unit 1) count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens (Unit 1) given a number, identify one more and one less (Unit 1) identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least (Unit 1) read and write numbers from 1 to 20 in numerals and words. (Unit 1)
Y2	<ul style="list-style-type: none"> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward (Unit 7 and 13) recognise the place value of each digit in a two-digit number (tens, ones) (Unit 4, 6 and 8) identify, represent and estimate numbers using different representations, including the number line (Unit 1, and 4) compare and order numbers from 0 up to 100; use <, > and = signs (Unit 1 and 4) read and write numbers to at least 100 in numerals and in words use place value and number facts to solve problems.
Y3	<ul style="list-style-type: none"> count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number (Unit 1 and 5) recognise the place value of each digit in a three-digit number (hundreds, tens, ones) (Unit 1 and 5) compare and order numbers up to 1000 (Unit 1) identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words (Unit 1 and 10) solve number problems and practical problems involving these ideas (Unit 1 and 5)
Y4	<ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 1000 (Unit 1, 3, 5, 8 and 13) find 1000 more or less than a given number (Unit 10) count backwards through zero to include negative numbers (Unit 1 and 5) recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) (Unit 1, 5 and 10) order and compare numbers beyond 1000 (Unit 5) identify, represent and estimate numbers using different representations (Unit 1, 5 and 10) round any number to the nearest 10, 100 or 1000 (Unit 5) solve number and practical problems that involve all of the above and with increasingly large positive numbers (Unit 1, 5 and 10)

	<ul style="list-style-type: none"> 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. (Unit 5).
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Y5	<ul style="list-style-type: none"> read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero 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 read Roman numerals to 1000 (M) and recognise years written in Roman numerals.
Y6	<ul style="list-style-type: none"> read, write, order and compare numbers up to 10,000,000 and determine the value of each digit (Unit 1) round any whole number to a required degree of accuracy (Unit 1) use negative numbers in context, and calculate intervals across 0 (Unit 5 and 6) solve number and practical problems that involve all of the above (Unit 1 and 5)

Number – addition and subtraction	
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EYFS	<p>22-36 mths</p> <ul style="list-style-type: none"> Knows that a group of things changes in quantity when something is added or taken away. <p>30-50 mths</p> <ul style="list-style-type: none"> Knows that numbers identify how many objects are in a set. Shows curiosity about numbers by offering comments or asking questions. Compares two groups of objects, saying when they have the same number. Shows an interest in number problems. Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same. <p>40-60 mths</p> <ul style="list-style-type: none"> Finds the total number of items in two groups by counting all of them. Says the number that is one more than a given number. Finds one more or one less from a group of up to five objects, then ten objects. In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. Begins to identify own mathematical problems based on own interests and fascinations. <p>ELG</p> <ul style="list-style-type: none"> Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.
Y1	<ul style="list-style-type: none"> read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (Unit 5) represent and use number bonds and related subtraction facts within 20 (Unit 1 and 5) add and subtract one-digit and two-digit numbers to 20, including zero (Unit 2, 5 and 9) solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$. (All units)
Y2	<ul style="list-style-type: none"> solve problems with addition and subtraction: (Unit 2, 5, 9 and 12) using concrete objects and pictorial representations, including those involving numbers, quantities and measures (Unit 2, 5, 9 and 12) applying their increasing knowledge of mental and written methods (Unit 2, 5, 9 and 12) recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (Unit 2, 5, 9 and 12) add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> a two-digit number and ones (Unit 1) a two-digit number and tens (Unit 1) two two-digit numbers (Unit 1) adding three one-digit numbers (Unit 2) show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot (Unit 9 and 12) recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. (Unit 12)
Y3	<ul style="list-style-type: none"> add and subtract numbers mentally, including: <ul style="list-style-type: none"> a three-digit number and ones (Unit 2, 6 and 11) a three-digit number and tens (Unit 2, 6 and 11) a three-digit number and hundreds (Unit 2, 6 and 11) add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction (Unit 11) estimate the answer to a calculation and use inverse operations to check answers (Unit 2, 6, and 11) solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. (Unit 2, 6, and 11)
Y4	<ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate (Unit 6 and 11) estimate and use inverse operations to check answers to a calculation (Unit 2, 6 and 11) solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. (Unit 2, 6 and 11)
Y5	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) (Unit 2, 6 and 11) add and subtract numbers mentally with increasingly large numbers (Unit 2, 6 and 11) use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy (Unit 2 and 6) solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. (Unit 2, 6 and 11)

Y6	<ul style="list-style-type: none"> perform mental calculations, including with mixed operations and large numbers (Unit 2, 3, 6 and 11) use their knowledge of the order of operations to carry out calculations involving the 4 operations (Unit 2) solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why (Unit 2 and 11) solve problems involving addition, subtraction, multiplication and division (Unit 2, 5, 6, 8 and 13) use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. (Unit 2, 6 and 11)
Number – multiplication and division	
EYFS	<p>30-50 mths</p> <ul style="list-style-type: none"> Shows curiosity about numbers by offering comments or asking questions. Shows an interest in number problems. Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same. <p>40-60 mths</p> <ul style="list-style-type: none"> N/A <p>ELG</p> <ul style="list-style-type: none"> They solve problems, including doubling, halving and sharing.
Y1	<ul style="list-style-type: none"> 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.(Unit 12)
Y2	<ul style="list-style-type: none"> recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Unit 6, 7 and 13) calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs (Unit 6, 7 and 13) show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot (Unit 6, 7 and 13) solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. (Unit 6, 7 and 13)
Y3	<ul style="list-style-type: none"> recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables (Unit 3, 8 and 13) 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 (Unit 3, 8 and 13) 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. (Unit 3, 8 and 13)
Y4	<ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12 (Unit 13) 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 (Unit 8) recognise and use factor pairs and commutativity in mental calculations (Unit 3) multiply two-digit and three-digit numbers by a one-digit number using formal written layout (Unit 3, 8 and 13) 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. (Unit 3, 8 and 13)
Y5	<ul style="list-style-type: none"> identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers (Unit 3, 8, 13 and 14) know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers (Unit 8) establish whether a number up to 100 is prime and recall prime numbers up to 19 (Unit 8) 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 (Unit 3 and 13) multiply and divide numbers mentally drawing upon known facts (Unit 1 and 12) 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 (Unit 3 and 13) multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 (Unit 1 and 12) recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) (Unit 8) solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes (Unit 3, 8 and 13) solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign (Unit 3 and 13) solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. (Unit 8 and 13)
Y6	<ul style="list-style-type: none"> long multiplication (Unit 3) 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 (Unit 13) divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context perform mental calculations, including with mixed operations and large numbers (Unit 2, 3, 6 and 11) identify common factors, common multiples and prime numbers (Unit 8) use their knowledge of the order of operations to carry out calculations involving the 4 operations (Unit 2) solve problems involving addition, subtraction, multiplication and division (Unit 2, 5, 6, 8 and 13) use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. (Unit 2, 6 and 11)

Number – fractions

EYFS	<p>40-60 mths</p> <ul style="list-style-type: none"> Begins to identify own mathematical problems based on own interests and fascinations. <p>ELG</p> <ul style="list-style-type: none"> They solve problems, including doubling, halving and sharing.
Y1	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> recognise, find and name a half as one of two equal parts of an object, shape or quantity (Unit 13) recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (Unit 13)
Y2	<ul style="list-style-type: none"> recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity (Unit 11 and 13) write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. (Unit 11 and 13)
Y3	<ul style="list-style-type: none"> count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 (Unit 5, 7 and 12) recognise, find and write fractions of a discrete set of objects: unit fractions and non unit fractions with small denominators (Unit 3, 8 and 13) recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators (Unit 3, 8 and 13) recognise and show, using diagrams, equivalent fractions with small denominators (Unit 3, 8 and 13) add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] (Unit 3, 8 and 13) compare and order unit fractions, and fractions with the same denominators (Unit 3, 8 and 13) solve problems that involve all of the above. (Unit 3, 8 and 13)
Y4	<ul style="list-style-type: none"> recognise and show, using diagrams, families of common equivalent fractions (Unit 7 and 12) count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. (Unit 7) 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 (Unit 7) add and subtract fractions with the same denominator (Unit 7 and 12) recognise and write decimal equivalents of any number of tenths or hundredths (Unit 7 and 12) recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ (Unit 7 and 12) 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 (Unit 7) round decimals with one decimal place to the nearest whole number (Unit 12) compare numbers with the same number of decimal places up to two decimal places (Unit 12) solve simple measure and money problems involving fractions and decimals to two decimal places. (Unit 11)
Y5	<ul style="list-style-type: none"> compare and order fractions whose denominators are all multiples of the same number (Unit 7, 10 and 12) identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths (Unit 7 and 12) 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, $5 \frac{2}{4} + 5 \frac{4}{4} = 5 \frac{6}{4} = 1 \frac{5}{1}$] (Unit 7, 10, 11 and 12) add and subtract fractions with the same denominator and denominators that are multiples of the same number (Unit 11) multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Unit 12) read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] (Unit 1, 7 and 12) recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (Unit 1, 7, 10 and 12) round decimals with two decimal places to the nearest whole number and to one decimal place (Unit 1 and 10) read, write, order and compare numbers with up to three decimal places (Unit 1 and 10) solve problems involving number up to three decimal places (Unit 1, 6 and 10) 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 (Unit 7 and 12) 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. (Unit 8)
Y6	<ul style="list-style-type: none"> use common factors to simplify fractions; use common multiples to express fractions in the same denomination (Unit 1) compare and order fractions, including fractions > 1 (Unit 1 and 7) add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions (Unit 7 and 11) multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] (Unit 13) divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] (Unit 13) associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] (Unit 7 and 12)

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| <ul style="list-style-type: none">• identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places (Unit 1 and 5)• multiply one-digit numbers with up to 2 decimal places by whole numbers (Unit 1, 5, 8 and 13)• use written division methods in cases where the answer has up to 2 decimal places (Unit 3)• solve problems which require answers to be rounded to specified degrees of accuracy (Unit 6)• recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. (Unit 1, 7 and 12) |
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Measurement

EYFS	<p>16-26 mths</p> <ul style="list-style-type: none"> • Enjoys filling and emptying containers • Associates a sequence of actions with daily routines. • Beginning to understand that things might happen 'now'. <p>22-36 mths</p> <ul style="list-style-type: none"> • Beginning to categorise objects according to properties such as shape or size. • Begins to use the language of size. • Understands some talk about immediate past and future, e.g. 'before', 'later' or 'soon'. • Anticipates specific time-based events such as mealtimes or home time. <p>30-50 mths</p> <ul style="list-style-type: none"> • N/A <p>40-60 mths</p> <ul style="list-style-type: none"> • Orders two or three items by length or height. • Orders two items by weight • Orders two items by capacity • Uses everyday language related to time. • Orders and sequences familiar events. • Measures short periods of time in simple ways <p>ELG</p> <ul style="list-style-type: none"> • Children use everyday language to talk about size, weight, capacity, distance, time and money to compare quantities and objects and to solve problems.
Y1	<ul style="list-style-type: none"> • compare, describe and solve practical problems for: <ul style="list-style-type: none"> ▪ lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] (Unit 1 and 8) ▪ mass/weight [for example, heavy/light, heavier than, lighter than] (Unit 4 and 8) ▪ capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] (Unit 4) ▪ time [for example, quicker, slower, earlier, later] (Unit 1, 4 and 13) • measure and begin to record the following: <ul style="list-style-type: none"> ▪ lengths and heights (Unit 1 and 8) ▪ mass/weight (Unit 4 and 8) ▪ capacity and volume (Unit 4) ▪ time (hours, minutes, seconds) (Unit 1, 4 and 13) • recognise and know the value of different denominations of coins and notes (Unit 6) • sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] (Unit 1) • recognise and use language relating to dates, including days of the week, weeks, months and years (Unit 1) <p>tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. (Unit 13)</p>
Y2	<ul style="list-style-type: none"> • 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 (Unit 1, 4, 8, 9 and 11) • compare and order lengths, mass, volume/capacity and record the results using >, < and = (Unit 1, 4, 8, 9 and 11) • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value (Unit 2, 5, 7 and 9) • find different combinations of coins that equal the same amounts of money (Unit 2, 5, 7 and 9) • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (Unit 2, 5, 7 and 9) • compare and sequence intervals of time (Unit 1, 7, 11 and 13) • 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 (Unit 1, 7, 11 and 13) • know the number of minutes in an hour and the number of hours in a day. (Unit 1, 7, 11 and 13)
Y3	<ul style="list-style-type: none"> • measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) (Unit 5, 12 and 14) • measure the perimeter of simple 2-D shapes (Unit 14) • add and subtract amounts of money to give change, using both £ and p in practical contexts (Unit 12) • tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (Unit 10) • 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 (Unit 10) • know the number of seconds in a minute and the number of days in each month, year and leap year (Unit 10) • compare durations of events [for example to calculate the time taken by particular events or tasks]. (Unit 10)
Y4	<ul style="list-style-type: none"> • Convert between different units of measure [for example, kilometre to metre; hour to minute] (Unit 6) • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres (Unit 14) • find the area of rectilinear shapes by counting squares (Unit 14) • estimate, compare and calculate different measures, including money in pounds and pence (Unit 6 and 11) • read, write and convert time between analogue and digital 12- and 24-hour clocks (Unit 6) • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. (Unit 6)
Y5	<ul style="list-style-type: none"> • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) (Unit 1 and 11) • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres (Unit 14) • calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes (Unit 14) • estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] (Unit 14) • solve problems involving converting between units of time (Unit 1, 5 and 11)

	<ul style="list-style-type: none"> use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. (Unit 6, 7 and 11)
Y6	<ul style="list-style-type: none"> solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate (Unit 2 and 6) use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 decimal places (Unit 1) convert between miles and kilometres recognise that shapes with the same areas can have different perimeters and vice versa (Unit 4) recognise when it is possible to use formulae for area and volume of shapes (Unit 4 and 7) calculate the area of parallelograms and triangles (Unit 4 and 7) calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³] (Unit 9)

Geometry – properties of shapes	
EYFS	<p>16-26 mths</p> <ul style="list-style-type: none"> Attempts, sometimes successfully, to fit shapes into spaces on inset boards or jigsaw puzzles. Uses blocks to create their own simple structures and arrangements. <p>22-36 mths</p> <ul style="list-style-type: none"> Notices simple shapes and patterns in pictures. Beginning to categorise objects according to properties such as shape or size. <p>30-50 months</p> <ul style="list-style-type: none"> Shows an interest in shape and space by playing with shapes or making arrangements with objects. Shows awareness of similarities of shapes in the environment. Shows interest in shape by sustained construction activity or by talking about shapes or arrangements. Shows interest in shapes in the environment. Uses shapes appropriately for tasks. Beginning to talk about the shapes of everyday objects, e.g. 'round' and 'tall'. <p>40-60+ months</p> <ul style="list-style-type: none"> Beginning to use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes. Selects a particular named shape. Uses familiar objects and common shapes to create and recreate patterns and build models. <p>ELG</p> <ul style="list-style-type: none"> They explore characteristics of everyday objects and shapes and use mathematical language to describe them.
Y1	<ul style="list-style-type: none"> recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> 2-D shapes [for example, rectangles (including squares), circles and triangles] (Unit 3 and 10) 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. (Unit 3 and 10)
Y2	<ul style="list-style-type: none"> identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line (Unit 3, 10 and 14) identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces (Unit 3, 10 and 14) identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] (Unit 3, 10 and 14) compare and sort common 2-D and 3-D shapes and everyday objects. (Unit 3, 10 and 14)
Y3	<ul style="list-style-type: none"> draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them (Unit 9) recognise angles as a property of shape or a description of a turn (Unit 9) 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 (Unit 9) identify horizontal and vertical lines and pairs of perpendicular and parallel lines. (Unit 9)
Y4	<ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes (Unit 4 and 9) identify acute and obtuse angles and compare and order angles up to two right angles by size (Unit 4 and 14) identify lines of symmetry in 2-D shapes presented in different orientations (Unit 4) complete a simple symmetric figure with respect to a specific line of symmetry. (Unit 14)
Y5	<ul style="list-style-type: none"> identify 3-D shapes, including cubes and other cuboids, from 2-D representations (Unit 9) know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (Unit 4 and 9) draw given angles, and measure them in degrees (o) (Unit 4 and 9) identify: <ul style="list-style-type: none"> angles at a point and one whole turn (total 360o) (Unit 4 and 9) angles at a point on a straight line and 2 1 a turn (total 180o) (Unit 4 and 9) other multiples of 90o use the properties of rectangles to deduce related facts and find missing lengths and angles (Unit 4 and 14) distinguish between regular and irregular polygons based on reasoning about equal sides and angles. (Unit 4 and 9)
Y6	<ul style="list-style-type: none"> draw 2-D shapes using given dimensions and angles (Unit 4, 9 and 14) recognise, describe and build simple 3-D shapes, including making nets (Unit 4 and 14) compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons (Unit 4 and 9) illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius (Unit 9) recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles (Unit 4)

Geometry – position and direction

EYFS	30-50 months <ul style="list-style-type: none"> • Uses positional language. 40-60+ months <ul style="list-style-type: none"> • Can describe their relative position such as 'behind' or 'next to'. ELG <ul style="list-style-type: none"> • Children use everyday language to talk about position, to compare quantities and objects and to solve problems.
Y1	<ul style="list-style-type: none"> • describe position, direction and movement, including whole, half, quarter and three-quarter turns. (Unit 14)
Y2	<ul style="list-style-type: none"> • order and arrange combinations of mathematical objects in patterns and sequences (Unit 3) • 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). (Unit 10 and 14)
Y3	N/A
Y4	<ul style="list-style-type: none"> • describe positions on a 2-D grid as coordinates in the first quadrant (Unit 9) • describe movements between positions as translations of a given unit to the left/right and up/down (Unit 9) • plot specified points and draw sides to complete a given polygon. (Unit 9)
Y5	<ul style="list-style-type: none"> • 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. (Unit 9)
Y6	<ul style="list-style-type: none"> • describe positions on the full coordinate grid (all 4 quadrants) (Unit 9 and 14) • draw and translate simple shapes on the coordinate plane, and reflect them in the axes (Unit 9)

Statistics

EYFS	N/A
Y1	N/A
Y2	<ul style="list-style-type: none"> • interpret and construct simple pictograms, tally charts, block diagrams and simple tables • 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 comparing categorical data.
Y3	<ul style="list-style-type: none"> • interpret and present data using bar charts, pictograms and tables (Unit 5 and 14) • 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. (Unit 4)
Y4	<ul style="list-style-type: none"> • interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. (Unit 6) • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. (Unit 6)
Y5	<ul style="list-style-type: none"> • solve comparison, sum and difference problems using information presented in a line graph (Unit 6 and 11) • complete, read and interpret information in tables, including timetables.
Y6	<ul style="list-style-type: none"> • interpret and construct pie charts and line graphs and use these to solve problems (Unit 10 and 12) • calculate and interpret the mean as an average (Unit 3 and 11)

Algebra

EYFS	Children are exposed to missing number calculations and puzzles such as: $\bullet \times \blacklozenge = 12$ What could \bullet represent? as precursors to algebra.
Y1	
Y2	
Y3	
Y4	
Y5	
Y6	<ul style="list-style-type: none"> • use simple formulae (Unit 2, 6, 7, 11, 12 and 14) • generate and describe linear number sequences (Unit 6, 10 and 12) • express missing number problems algebraically (Unit 4, 6, 7 and 12) • find pairs of numbers that satisfy an equation with 2 unknowns 2, 4, 8, 10, 11, 12 and 14) • enumerate possibilities of combinations of 2 variables (Unit 8, 10 and 11)