

Maths Skills Progression (Ready-to-Progress criteria highlighted in red)

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Counting	<p>Count objects, actions and sounds. Count beyond ten.</p> <p>Verbally count beyond 20, recognising the pattern of the counting system.</p>	<p>1NPV-1 Count within 100, forwards and backwards, starting with any number.</p> <p>1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.</p>	<p>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward</p>	<p>count from 0 in multiples of 4, 8, 50 and 100;</p> <p>find 10 or 100 more or less than a given number</p>	<p>count backwards through zero to include negative numbers</p> <p>count in multiples of 6, 7, 9, 25 and 1 000</p> <p>find 1 000 more or less than a given number</p>	<p>interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</p>	<p>use negative numbers in context, and calculate intervals across zero</p>
Comparing numbers	<p>Compare numbers</p> <p>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</p>	<p>use the language of: equal to, more than, less than (fewer), most, least</p> <p>1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =</p>	<p>compare and order numbers from 0 up to 100; use <, > and = signs</p>	<p>compare and order numbers up to 1000</p> <p>3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.</p>	<p>order and compare numbers beyond 1000</p> <p>4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.</p>	<p>read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</p> <p>5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.</p>	<p>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</p> <p>6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).</p>

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<p style="text-align: center;">Identifying and representing</p>	<p>Subitise. Link the number symbol (numeral) with its cardinal number value.</p> <p>Subitise (recognising quantities without counting) up to 5.</p>	<p>identify and represent numbers using objects and pictorial representations including the number line</p>	<p>identify, represent and estimate numbers using different representations, including the number line</p> <p>2NPV-2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.</p>	<p>identify, represent and estimate numbers using different representations</p> <p>3NPV-3 Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.</p> <p>3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.</p>	<p>identify and represent numbers using objects and pictorial representations including the number line</p> <p>4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.</p> <p>4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.</p>	<p>5NPV-3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.</p> <p>5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.</p>	<p>6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.</p> <p>6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.</p>
<p style="text-align: center;">Reading and Writing</p>	<p>Link the number symbol (numeral) with its cardinal number value.</p>	<p>read and write numbers from 1 to 20 in numerals and words.</p>	<p>read and write numbers to at least 100 in numerals and in words</p>	<p>read and write numbers up to 1 000 in numerals and in words tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks (copied from Measurement)</p>	<p>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.</p>	<p>read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (appears also in Comparing Numbers) read Roman numerals to 1 000 (M) and recognise years written in Roman numerals.</p>	<p>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit (appears also in Understanding Place Value)</p>

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<p style="text-align: center;">Place value</p>	<p>Understand the 'one more than/one less than' relationship between consecutive numbers. Explore the composition of numbers to 10.</p> <p>Have a deep understanding of numbers to 10, including the composition of each number.</p>		<p>2NPV-1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and nonstandard partitioning.</p>	<p>3NPV-2 Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.</p>	<p>4NPV-2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning.</p>	<p>read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit</p> <p><i>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</i></p> <p>5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and nonstandard partitioning.</p>	<p>read, write, order and compare numbers up to 10 000 000 and determine the value of each digit</p> <p>6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning.</p>
<p style="text-align: center;">Rounding</p>					<p>round any number to the nearest 10, 100 or 1 000</p> <p>4NPV-3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.</p>	<p>round any number up to 1 000 000 to the nearest 10, 100, 1 000, 10 000 and 100 000</p>	<p>round any whole number to a required degree of accuracy</p>
<p style="text-align: center;">Problem Solving</p>	<p>Solve real world mathematical problems with numbers up to 5.</p>		<p>use place value and number facts to solve problems</p>	<p>solve number problems and practical problems involving these ideas.</p>	<p>solve number and practical problems that involve all of the above and with increasingly large positive numbers</p>	<p>use place value and number facts to solve problems</p>	<p>solve number problems and practical problems involving these ideas.</p>

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<p style="text-align: center;">Number bonds</p>	<p>Automatically recall number bonds for numbers 0-5 and some to 10.</p> <p>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.</p>	<p>represent and use number bonds and related subtraction facts within 20</p> <p>1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.</p>	<p>recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p>	<p>3AS-1 Calculate complements to 100.</p>			
<p style="text-align: center;">Mental calculation for addition and subtraction</p>	<p>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.</p>	<p>add and subtract one-digit and two-digit numbers to 20, including zero read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</p> <p>1NF-1 Develop fluency in addition and subtraction facts within 10.</p>	<p>add and subtract numbers using concrete objects, pictorial representations, and mentally, including:</p> <ul style="list-style-type: none"> * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers <p>show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</p> <p>2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice.</p> <p>2AS-1 Add and subtract across 10.</p> <p>2AS-2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?"</p>	<p>add and subtract numbers mentally, including:</p> <ul style="list-style-type: none"> * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds <p>3NF-1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</p>	<p>4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)</p>	<p>add and subtract numbers mentally with increasingly large numbers</p>	<p>perform mental calculations, including with mixed operations and large numbers</p> <p>use their knowledge of the order of operations to carry out calculations involving the four operations</p> <p>6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</p>

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Written methods for + and -		1AS-2 Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.	2AS-3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. 2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.	3AS-2 Add and subtract up to three-digit numbers using columnar methods	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	
Inverse and checking answers			recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	estimate the answer to a calculation and use inverse operations to check answers 3AS-3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.	estimate and use inverse operations to check answers to a calculation	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. 6AS/MD-2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.
Problem solving for addition and subtraction	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly.	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$	solve problems with addition and subtraction: * using concrete objects and pictorial representations, including those involving numbers, quantities and measures * applying their increasing knowledge of mental and written methods	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 6AS/MD-4 Solve problems with 2 unknowns.

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<p style="text-align: center;">Multiplication and division facts</p>			<p>count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward</p> <p>recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</p> <p>2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.</p>	<p>3NF-2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.</p>	<p>count in multiples of 6, 7, 9, 25 and 1000</p> <p>4NF-1 Recall multiplication and division facts up to 12×12 and recognise products in multiplication tables as multiples of the corresponding number.</p>	<p>count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000</p> <p>5NF-1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.</p>	
<p style="text-align: center;">Mental calculation for Mult. And Div.</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 (appears also in Written Methods)</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>4MD-1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.</p>	<p>multiply and divide numbers mentally drawing upon known facts</p> <p>5MD-1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.</p>	<p>perform mental calculations, including with mixed operations and large numbers</p> <p>6AS/MD-1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).</p>

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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Written calculation for Mult. And Div.</p>			<p>calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs</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>3NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).</p>	<p>multiply two-digit and three-digit numbers by a one-digit number using formal written layout</p> <p>4NF-2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders.</p> <p>4NF-3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100).</p> <p>4MD-3 Understand and apply the distributive property of multiplication.</p>	<p>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. 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</p> <p>5NF-2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).</p> <p>5MD-3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.</p> <p>5MD-4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.</p>	<p>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 short division where appropriate for the context. 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. use written division methods in cases where the answer has up to two decimal places (copied from Fractions (including decimals))</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Order of operations</p>							<p>use their knowledge of the order of operations to carry out calculations involving the four operations</p>

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<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Problem solving with Multiplication and division</p>		<p>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</p>	<p>solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</p> <p>2MD-2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).</p>	<p>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</p> <p>3MD-1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.</p>	<p>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</p> <p>4MD-2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.</p>	<p>solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</p> <p>5MD-2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.</p>	<p>solve problems involving addition, subtraction, multiplication and division</p> <p>6AS/MD-4 Solve problems with 2 unknowns.</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Counting in fractional steps</p>			<p>Pupils should count in fractions up to 10, starting from any number and using the $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on the number line (Non Statutory Guidance)</p>	<p>count up and down in tenths</p>	<p>count up and down in hundredths</p>		
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Recognising fractions</p>		<p>recognise, find and name a half as one of two equal parts of an object, shape or quantity</p>	<p>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</p>	<p>recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>3F-1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.</p> <p>3F-2 Find unit fractions of quantities using known division facts (multiplication tables fluency).</p>	<p>recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten</p>	<p>recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents</p> <p>5F-1 Find non-unit fractions of quantities.</p>	<p>6F-1 Recognise when fractions can be simplified, and use common factors to simplify fractions.</p> <p>6F-2 Express fractions in a common denomination and use this to compare fractions that are similar in value.</p>

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Comparing fractions			<p>compare and order unit fractions, and fractions with the same denominators</p> <p>3F-3 Reason about the location of any fraction within 1 in the linear number system.</p>	<p>4F-1 Reason about the location of mixed numbers in the linear number system.</p>	compare and order fractions whose denominators are all multiples of the same number	compare and order fractions, including fractions >1	
Comparing decimals					compare numbers with the same number of decimal places up to two decimal places	read, write, order and compare numbers with up to three decimal places	identify the value of each digit in numbers given to three decimal places
Rounding including decimals					round decimals with one decimal place to the nearest whole number	round decimals with two decimal places to the nearest whole number and to one decimal place	solve problems which require answers to be rounded to specified degrees of accuracy
Equivalence			<p>write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.</p>	<p>recognise and show, using diagrams, equivalent fractions with small denominators</p>	<p>recognise and show, using diagrams, families of common equivalent fractions</p> <p>4F-2 Convert mixed numbers to improper fractions and vice versa.</p>	<p>identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths</p> <p>5F-2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.</p> <p>5F-3 Recall decimal fraction equivalents for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$ and for multiples of these proper fractions.</p>	<p>use common factors to simplify fractions; use common multiples to express fractions in the same denomination</p>

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<p style="text-align: center;">Addition and subtraction of fractions</p>				<p>3F-4 Add and subtract fractions with the same denominator, within 1.</p>	<p>4F-3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.</p>	<p>add and subtract fractions with the same denominator and multiples of the same number</p>	<p>add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p>
<p style="text-align: center;">Multiplication and division of fractions</p>					<p>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</p>	<p>multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams</p>	<p>multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $1/4 \times 1/2 = 1/8$)</p> <p>multiply one-digit numbers with up to two decimal places by whole numbers</p> <p>divide proper fractions by whole numbers (e.g. $1/3 \div 2 = 1/6$)</p> <p>multiply one-digit numbers with up to two decimal places by whole numbers</p> <p>multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places</p> <p>identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places</p> <p>associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $3/8$)</p> <p>use written division methods in cases where the answer has up to two decimal places</p>

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<p>Problem solving with fractions</p>				<p>solve problems that involve all of the above</p>	<p>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</p>	<p>solve problems involving numbers up to three decimal places</p> <p>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 with a denominator of a multiple of 10 or 25.</p>	
<p>Ratio and proportion</p>							<p>solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</p> <p>solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison</p> <p>solve problems involving similar shapes where the scale factor is known or can be found</p> <p>solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.</p> <p>6AS/MD-3 Solve problems involving ratio relationships.</p>

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Comparing and estimating measurements	<p>Compare length, weight and capacity.</p>	<p>compare, describe and solve practical problems for:</p> <ul style="list-style-type: none"> * lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] * time [e.g. quicker, slower, earlier, later] <p>sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]</p>	<p>compare and order lengths, mass, volume/capacity and record the results using >, < and =</p> <p>compare and sequence intervals of time</p>	<p>compare durations of events, for example to calculate the time taken by particular events or tasks estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Telling the Time)</p>	<p>estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring)</p>	<p>calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes (also included in measuring)</p>	<p>calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3.</p>
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Measuring and calculating		measure and begin to record the following: * lengths and heights * mass/weight * capacity and volume * time (hours, minutes, seconds)	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 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	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	estimate, compare and calculate different measures , including money in pounds and pence (appears also in Comparing) find the area of rectilinear shapes by counting squares	use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling. calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) 5G-2 Compare areas and calculate the area of rectangles (including squares) using standard units.	solve problems involving the calculation and conversion of units of measure , using decimal notation up to three decimal places where appropriate (appears also in Converting) 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 [e.g. mm ³ and km ³]. recognise when it is possible to use formulae for area and volume of shapes
Telling the time	Begin to describe a sequence of events, real or fictional, using words, such as 'first', 'then...'	tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.	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.	tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)		

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<p style="text-align: center;">Converting</p>			<p>know the number of minutes in an hour and the number of hours in a day. (appears also in Telling the Time)</p>	<p>know the number of seconds in a minute and the number of days in each month, year and leap year</p>	<p>convert between different units of measure (e.g. kilometre to metre; hour to minute) read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)</p> <p>solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Telling the Time)</p>	<p>convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; millimetre; gram and kilogram; litre and millilitre)</p> <p>solve problems involving converting between units of time</p> <p>understand and use equivalences between metric units and common imperial units such as inches, pounds and pints</p>	<p>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>solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (appears also in Measuring and Calculating) convert between miles and kilometres</p>
<p style="text-align: center;">Identifying properties</p>	<p>Select, rotate and manipulate shapes in order to develop spatial reasoning skills.</p>	<p>1G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.</p>	<p>identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line</p> <p>2G-1 Use precise language to describe the properties of 2D and 3D shapes and compare shapes by reasoning about similarities and differences in properties.</p>		<p>4G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.</p> <p>4G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.</p>	<p>identify 3-D shapes, including cubes and other cuboids, from 2-D representations</p>	<p>recognise, describe and build simple 3-D shapes, including making nets (appears also in Drawing and Constructing)</p>

Maths Skills Progression (Ready-to-Progress criteria highlighted in red)

<p style="text-align: center;">Drawing and constructing</p>	<p>Compose and decompose shapes so that children can recognise a shape can have other shapes within it, just as numbers can.</p>	<p>1G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.</p>		<p>draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them</p> <p>3G-2 Draw polygons by joining marked points and identify parallel and perpendicular sides.</p>	<p>complete a simple symmetric figure with respect to a specific line of symmetry</p> <p>4G-1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.</p>	<p>draw given angles, and measure them in degrees ($^{\circ}$)</p>	<p>draw 2-D shapes using given dimensions and angles</p> <p>6G-1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.</p>
<p style="text-align: center;">Comparing and classifying</p>	<p>Continue, copy and create repeating patterns.</p>		<p>compare and sort common 2-D and 3-D shapes and everyday objects</p>		<p>compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</p>	<p>use the properties of rectangles to deduce related facts and find missing lengths and angles</p>	<p>compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</p>
<p style="text-align: center;">Angles</p>				<p>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</p> <p>identify horizontal and vertical lines and pairs of perpendicular and parallel lines</p> <p>3G-1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.</p>	<p>identify acute and obtuse angles and compare and order angles up to two right angles by size</p>	<p>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>5G-1 Compare angles, estimate and measure angles in degrees ($^{\circ}$) and draw angles of a given size.</p>	<p>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</p>

Maths Skills Progression (Ready-to-Progress criteria highlighted in red)

Direction and position	Draw information from a simple map.	describe position, direction and movement, including half, quarter and three-quarter turns.	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	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)
Data			interpret and construct simple pictograms, tally charts, block diagrams and simple tables	interpret and present data using bar charts, pictograms and tables	interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	complete, read and interpret information in tables, including timetables	interpret and construct pie charts and line graphs and use these to solve problems
Problem solving with data			solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.	solve comparison, sum and difference 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	solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.
Algebra		<i>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ (copied from Addition and Subtraction)</i>	<i>recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. (copied from Addition and Subtraction)</i>	<i>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. (copied from Addition and Subtraction)</i>		<i>use the properties of rectangles to deduce related facts and find missing lengths and angles (copied from Geometry: Properties of Shapes)</i>	<i>express missing number problems algebraically find pairs of numbers that satisfy number sentences involving two unknowns enumerate all possibilities of combinations of two variables</i>
Formulae					<i>Perimeter can be expressed algebraically as $2(a + b)$ where a and b are the dimensions in the same unit. (Copied from NSG measurement)</i>		<i>use simple formulae</i>

Maths Skills Progression (Ready-to-Progress criteria highlighted in red)

Sequences		sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening (copied from Measurement)	compare and sequence intervals of time (copied from Measurement) order and arrange combinations of mathematical objects in patterns (copied from Geometry: position and direction)				generate and describe linear number sequences
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