

# Maths Overview 2024 – 2025



## Year 5/6

Nicky Nook Autumn Term 1	Year 5	Year 6
<p>Number and Place Value – 1-2 weeks</p>	<p>Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.            Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit.            Read, write, order and compare numbers with up to 3 decimal places            Identify the value of each digit to three decimal places.            Identify represent and estimate numbers using the number line.            Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.            Round decimals with two decimal places to the nearest whole number and to one decimal place.            Find 0.01, 0.1, 1, 10, 100, 100 and other powers of 10 more or less than a given number            Multiply/divide whole numbers and decimals by 10, 100 and 1000.</p>	<p>Count forwards or backwards in steps of integers, decimals, powers of 10.            Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit.              Identify the value of each digit to three decimal places.            Identify, represent and estimate numbers using the number line.            Round any whole number to a required degree of accuracy.            Round decimals with three decimal places to the nearest whole number or one or two decimal places              Find 0.001, 0.01, 0.1, 1, 10 and powers of 10 more/less than a given number.            Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.</p>

<p>Addition and Subtraction 1-2 weeks</p>	<p>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).          Select a mental strategy appropriate for the numbers involved in the calculation.          Recall and use addition and subtraction facts for 1 and 10 (with decimal numbers to one decimal place).          Derive and use addition and subtraction facts for 1 (with decimal numbers to two decimal places). Add and subtract numbers mentally with increasingly large numbers and decimals to two decimal places.          Add and subtract whole numbers with more than 4 digits and decimals with two decimal places, including using formal written methods (columnar addition and subtraction).</p>	<p>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).          Select a mental strategy appropriate for the numbers in the calculation.          Recall and use addition and subtraction facts for 1 (with decimals to two decimal places).          Perform mental calculations including with mixed operations and large numbers and decimals.</p> <p>Add and subtract whole numbers and decimals using formal written methods (columnar addition and subtraction).</p>
<p>Multiplication 1-2 weeks</p>	<p>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).          Use partitioning to double any number, including decimals to two decimal places. Multiply and divide numbers mentally drawing upon known facts.          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.</p>	<p>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)          Use partitioning to double any number. Perform mental calculations, including with mixed operations and large numbers.          Multiply multi-digit numbers up to 4 digits by a two digit whole number using the formal written method of long multiplication.</p>
<p>Division 1-2 weeks</p>	<p>Use partitioning to halve any number, including decimals to two decimal places. Multiply and divide numbers mentally drawing upon known facts.          Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context</p> <p>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).</p>	<p>Use partitioning to halve any number. Perform mental calculations, including with mixed operations and large numbers.          Divide numbers up to 4 digits by a two-digit whole number using the formal written methods of short or long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.          Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)</p>

Assessment and Retrieval		
--------------------------	--	--

Nicky Nook Autumn Term 2	Year 5	Year 6
Fractions, Decimals and Percentages 1-2 weeks	<p>Compare and order fractions whose denominators are all multiples of the same number (including on a number line). Recognise mixed numbers and improper fractions and convert from one form to the other. Add and subtract fractions with denominators that are the same and that are multiples of the same number (using diagrams). Write statements <math>&gt; 1</math> as a mixed number 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.</p>	<p>Compare and order fractions, including fractions <math>&gt; 1</math> (including on a number line). Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Find simple percentages of amounts Solve problems involving the calculation of percentages (e.g. of measures and such as 15% of 260) and the use of percentages for comparison.</p>

Algebra and Sequences 1 weeks Year 5 – Time	Continue to read, write and convert time between analogue and digital 12 and 24-hour clocks.	Use simple formulae. Generate and describe linear number sequences. Express missing number problems algebraically. Find pairs of numbers that satisfy an equation with two unknowns. Enumerate possibilities of combinations of two variables.
Geometry and Area 1-2 weeks	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees ( $^{\circ}$ ). Identify: - angles at a point and one whole turn (total $360^{\circ}$ ). - angles at a point on a straight line and half a turn (total $180^{\circ}$ ). - other multiples of $90^{\circ}$ .	Compare/classify geometric shapes based on the properties and sizes. Draw 2-D shapes using given dimensions and angles. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. Find unknown angles in any triangles, quadrilaterals, regular polygons
Statistics 1-2 weeks	Complete and interpret information in a variety of sorting diagrams (including those used to sort properties of numbers and shapes). Complete, read and interpret information in tables and timetables.	Continue to complete and interpret information in a variety of sorting diagrams (including sorting properties of numbers and shapes). Interpret and construct pie charts and line graphs and use these to solve problems.
Assessment and Retrieval		

Nicky Nook Spring Term 1	Year 5	Year 6
Place Value, Negative Numbers and Number Sequences 1 Week	Count forwards and backwards in decimal steps. Round decimals with two decimal places to the nearest whole number and to one decimal place.	Order and compare numbers including integers, decimals and negative numbers. Use negative numbers in context, and calculate intervals across zero.

	<p>Interpret negative numbers in context, count on and back with positive and negative whole numbers, including through zero. Continue to order temperatures including those below 0 degrees.</p> <p>Describe and extend number sequences including those with multiplication/division steps and where the step size is a decimal.</p>	<p>Describe and extend number sequences including those with multiplication and division steps, inconsistent steps, alternating steps and those where the step size is a decimal.</p> <p>Solve number and practical problems that involve all of the above.</p>
Co-ordinates and Geometry 1-2 Weeks	<p>Describe positions on the first quadrant of a coordinate grid.</p> <p>Plot specified points and complete shapes. 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>Describe positions on the full coordinate grid (all four quadrants).</p> <p>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes</p>
Calculations 2-3 Weeks	<p>Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</p> <p>Solve addition and subtraction problems involving missing numbers.</p>	<p>Multiply one-digit numbers with up to two decimal places by whole numbers.</p> <p>Use written division methods in cases where the answer has up to two decimal places.</p> <p>Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</p> <p>Use knowledge of the order of operations to carry out calculations.</p> <p>Solve problems involving all four operations including those with missing numbers.</p>
Fractions 2 Weeks	<p>Read and write decimal numbers as fractions (e.g. <math>0.71 = \frac{71}{100}</math>). Count on and back in mixed number steps such as <math>1\frac{1}{2}</math>.</p> <p>Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.</p> <p>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.</p>	<p>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. Associate a fraction with division and calculate decimal fraction equivalents (e.g. <math>0.375 = \frac{3}{8}</math> and <math>\frac{3}{8} = 0.375</math>).</p> <p>Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. <math>\frac{1}{2} \times \frac{2}{3} = \frac{1}{3}</math>).</p>

	Compare and order fractions whose denominators are all multiples of the same number.	Divide proper fractions by whole numbers (e.g. $\frac{1}{2} \div 2 = \frac{1}{4}$ ). Solve problems involving fractions.
Assessment and Retrieval		

Nicky Nook Spring Term 2	Year 5	Year 6
Ratio and Proportion 1 Week	Add and subtract fractions with denominators that are the same and that are multiples of the same number (using diagrams) Write statements greater than 1 as a mixed number.	Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison Solve problems involving similar shapes where the scale factor is known or can be found Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
Statistics 1 Week	Solve comparison, sum and difference problems using information presented in all types of graph including a line graph. Calculate and interpret the mode, median and range.	Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average
Geometry 1 Week	Identify 3-D shapes, including cubes and other cuboids, from 2-D representations Use the properties of rectangles to deduce related facts and find missing lengths and angles Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	Recognise, describe and build simple 3-D shapes, including making nets Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius

Measurement 2 Weeks	<p>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</p> <p>Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>) and estimate the area of irregular shapes</p> <p>Estimate volume [for example, using 1 cm<sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]</p> <p>Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)</p> <p>Solve problems involving converting between units of time</p> <p>Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling</p>	<p>Recognise that shapes with the same areas can have different perimeters and vice versa</p> <p>Calculate the area of parallelograms and triangles</p> <p>Recognise when it is possible to use formulae for area and volume of shapes</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 – time and measure</p>
Algebra 1 Week		<p>Express missing number problems algebraically</p> <p>Find pairs of numbers that satisfy an equation with two unknowns</p> <p>Enumerate possibilities of combinations of two variables</p>
Assessment and Retrieval		

Nicky Nook Summer Term 1	Year 5	Year 6
Place Value	<p>Solve number and practical problems involving all previously taught skills with number and place value.</p> <p>Read Roman numerals to 1000; recognise years written as such.</p>	Revision based on need

Measurement and Statistics	Complete and interpret information in a variety of sorting diagrams. Complete, read and interpret information in tables and timetables.	Revision based on need
Geometry	Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles. Draw given angles and measure them in degrees. Identify – angles at a point, whole turn, angles on a straight line and multiples of 90 degrees.	Revision based on need
Multiplication	Identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers. Know and use the vocabulary of prime numbers, prime factors and composite numbers. Establish whether a number up to 100 is prime and recall prime numbers to 19.	Applied Maths
Assessment and Retrieval		Applied Maths

Nicky Nook Summer Term 2	Year 5	Year 6
Multiplication	Solve problems involving multiplication and division including using their knowledge of multiples, factors, squares and cubes.	Nicky Nook Fiver Challenge
Division	Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	Applied Maths
Fractions	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	Applied Maths
Percentages	Recognise the per cent symbol and understand that per cent relates to number of parts 'per 100' and write percentages as a	Applied Maths

	<p>fraction with denominator of 100 and as a decimal.</p> <p>Solve problems with fractions and decimals to three places.</p> <p>Solve problems which require knowing percentage and decimal equivalents <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math> and <math>\frac{4}{5}</math> and fractions with a denominator of a multiple of 10 or 25.</p>	
Assessment and Retrieval		