

## Hunnyhill - Year 6 2021-2022 Yearly Maths Overview- Recovery

Term	Estimated duration	Domain	Strands
Autumn 1 6 weeks + 3 days	13 lessons	Number and Place Value (Link to measures)	<p style="text-align: center;"><u>Y4</u></p> <ul style="list-style-type: none"> <li>● Read, write, compare and order numbers up to 10,000.</li> </ul> <p style="text-align: center;"><u>Y5</u></p> <ul style="list-style-type: none"> <li>● Read, write, compare and order numbers up to 100,000</li> <li>● Introduce numbers up to 1,000,000</li> <li>● Read, write and order numbers to 1 000 000 and determine the value of each digit in the number.</li> <li>● Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</li> <li>● Recap on the concept of tenths and hundredths and identify the place value of decimal numbers</li> <li>● Read, write and order decimal numbers with one and two decimal places, relating this to knowledge and understanding of “tenths” and “hundredths”.</li> <li>● Round decimals with two decimal places to the nearest whole number and to one decimal place.</li> <li>● Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.</li> </ul>
	20 lessons	Calculation (Link to measures)	<p style="text-align: center;"><u>Y5</u></p> <p><u>Addition and Subtraction</u></p> <ul style="list-style-type: none"> <li>● Use a range of mental strategies to add and subtract numbers efficiently.</li> <li>● Confidently add and subtract together numbers with up to 4-digits, using a formal written (column) method where appropriate.</li> <li>● Use inverse operations to check my answers</li> <li>● Choose an appropriate method (mental or written) for adding and subtracting numbers</li> <li>● Use rounding to approximate a solution or answer to check accuracy.</li> <li>● Introduce square and cubed numbers</li> </ul> <p><u>Multiplication and Division</u></p> <ul style="list-style-type: none"> <li>● Multiply and divide numbers mentally drawing upon known facts.</li> <li>● Multiply numbers up to 3 digits by a one or two digit number using a formal written method, including long multiplication.</li> <li>● Divide numbers up to 3 digits by a one digit number using a formal written method, including long multiplication for two-digit numbers or short division.</li> <li>● Use and apply known facts to use a chunking strategy for division of up to four digit numbers by a one or two-digit number.</li> <li>● Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. (Link to converting measures)</li> <li>● Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers</li> <li>● Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.</li> <li>● Establish whether a number up to 100 is prime and recall prime numbers up to 19.</li> </ul>

## Hunnyhill - Year 6 2021-2022 Yearly Maths Overview- Recovery

Autumn 2 7 weeks	15 lessons	Fractions, Decimals and Percentages (Link to place value)	<u>Y5</u>	<ul style="list-style-type: none"> <li>• I understand the link between fractions and division</li> <li>• Confidently identify the place value of decimal numbers with 3 decimal places</li> <li>• Understand percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{2}{5}</math>, <math>\frac{4}{5}</math> and those fractions with a denominator of a multiple of 10 or 25.</li> <li>• Recognise the percent symbol (%) and understand that percent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.</li> <li>• Round decimals with two decimal places to the nearest whole number and to one decimal place.</li> <li>• Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements <math>&gt; 1</math> as a mixed number.</li> <li>• Recap on equivalent fractions</li> <li>• Add and subtract fractions with the same denominator and denominators that are multiples of the same number</li> </ul>
	10 lessons	Number and Place Value (Link to measures)	<u>Y5</u>	<p>Daily counting (forwards and backwards) in powers of ten for any given number up to 1 000 000 and in a decimal sequence involving numbers to 2 decimal places.</p> <ul style="list-style-type: none"> <li>• Read, write and order numbers to 1 000 000 and determine the value of each digit in the number.</li> <li>• Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.</li> <li>• Round decimals with two decimal places to the nearest whole number and to one decimal place.</li> <li>• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero.</li> </ul> <p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>• Can I confidently read, write, order and compare numbers up to 10 000 000?</li> <li>• Can I determine the value of each digit in numbers that I work with, including decimals to three decimal places?</li> <li>• Can I confidently use my working of knowledge of place value, for example when multiplying / dividing by 10, 100, 1000, explaining the effect on the digits? (Link to measures)</li> </ul>
	10 lessons	Calculation (Link to measures)	<u>Y5</u>	<ul style="list-style-type: none"> <li>• Recognise and use square numbers and cube numbers, and notation for squared (2) and cubed (3)</li> </ul> <p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>• Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication</li> <li>• 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</li> <li>• Use rounding and mental calculation skills to make approximations for written calculations)</li> <li>• Perform mental calculations, drawing upon known facts, including with mixed operations and large numbers</li> <li>• Identify common factors, common multiples and prime numbers and use these when solving problems</li> </ul>

## Hunnyhill - Year 6 2021-2022 Yearly Maths Overview- Recovery

			<ul style="list-style-type: none"> <li>Solve problems involving more than one operation, developing an understanding of the order of operations to carry out calculations involving the four operations</li> </ul>
Spring 1 6 weeks	15 lessons	Fractions, Decimals, Percentages (Link to place value)	<p style="text-align: center;"><u>Y5</u></p> <ul style="list-style-type: none"> <li>I can confidently recall fraction, decimal, percentage equivalents</li> <li>Read, write, order and compare numbers with up to three decimal places.</li> <li>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.</li> <li>Round decimals with two decimal places to the nearest whole number and to one decimal place.</li> <li>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements &gt; 1 as a mixed number.</li> <li>Compare and order fractions whose denominators are all multiples of the same number (Link to equivalent fractions using diagrams)</li> <li>Add and subtract fractions with the same denominator and denominators that are multiples of the same number</li> </ul> <p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>I can find percentages of amounts</li> <li>Can I use and apply my knowledge of common multiples to simplify fractions?</li> <li>Can I multiply fractions by whole numbers?</li> <li>Can I divide proper fractions by whole numbers?</li> </ul>
	10 lessons	Ratio and Proportion (Link to fractions and division)	<p style="text-align: center;"><i>(Not explicitly covered in year 5 curriculum)</i></p> <p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>I understand the concept of and can use the ratio symbol</li> <li>Can I solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts?</li> <li>Can I solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison?</li> <li>Can I solve problems involving similar shapes where the scale factor is known or can be found?</li> <li>Can I solve problems involving unequal sharing and grouping using knowledge of fractions and multiples?</li> </ul>
	5 lessons	Statistics (Link to all four operations)	<p style="text-align: center;"><u>Y5</u></p> <ul style="list-style-type: none"> <li>Use and read timetables to find out and use information.</li> <li>Use the information in a variety of tables to work out missing data.</li> <li>Read and interpret the information presented in a variety of graph and use it to answer questions about comparisons, sums and differences.</li> </ul> <p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>Can I interpret and construct pie charts and line graphs, using them to answer a range of questions and talk about the information they give?</li> </ul>



## Hunnyhill - Year 6 2021-2022 Yearly Maths Overview- Recovery

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Spring 2 4 weeks 4 days (bank holiday)	10 lessons	Geometry	<p style="text-align: center;"><u>Y5</u></p> <ul style="list-style-type: none"> <li>Identify and name 2-D and 3-D shapes and describe their properties</li> <li>Identify and name acute, obtuse and reflex angles and explain their properties.</li> <li>Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</li> <li>Identify, describe and represent the position of a shape following a reflection and a translation.</li> </ul> <p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>Can I draw 2D shapes when given dimensions and angles?</li> <li>Can I recognize and make simple 3D shapes, including making nets?</li> <li>Can I find unknown angles in triangles, quadrilaterals and regular polygons? (Link to calculations)</li> <li>Can I illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius?</li> <li>Can I recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles?</li> <li>Can I describe positions on the full coordinate grid (all four quadrants)?</li> <li>Can I draw and translate simple shapes on the coordinate plane, and reflect them in the axes?</li> </ul>
	5 lessons	Calculation (Link to measures)	<p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>I understand the order of operations</li> <li>I can multiply 3 and 4 digit numbers by 2 digit numbers</li> <li>I can divide 3 and 4 digit numbers by 2 digit numbers</li> <li>Have confident formal written and mental strategies for all four operations</li> </ul>
	9 lessons	Fractions, Decimals, Percentages (Link to division and place value)	<p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>Can I find fractions or percentages of amounts?</li> <li>Can I use and apply my knowledge of common multiples to simplify fractions?</li> <li>Can I confidently compare and order fractions?</li> <li>Can I add and subtract fractions?</li> <li>Can I multiply fractions by whole numbers?</li> <li>Can I multiply fractions by fractions?</li> <li>Can I divide proper fractions by whole numbers?</li> <li>Can I calculate decimal fraction equivalents?</li> </ul>
Summer 1 7 weeks	10	Measures and Calculation	<p style="text-align: center;"><u>Y5</u></p> <ul style="list-style-type: none"> <li>Do I have knowledge of imperial units of measure? Can I find metric equivalents? (e.g. inches, pounds, pints)</li> <li>Can I use my calculation skills to estimate the volume of cubes and cuboids? (Link to multiplication)</li> <li>Can I estimate capacity using my knowledge of standard units of measure?</li> </ul> <p style="text-align: center;"><u>Y6</u></p>

## Hunnyhill - Year 6 2021-2022 Yearly Maths Overview- Recovery

(SATS for 1 week)			<ul style="list-style-type: none"> <li>Can I convert between different units of measure? (Link to place value x10 x100 x1000)</li> <li>Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres (Link to calculation)</li> <li>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 (Link to calculations)</li> <li>I can read a range of scales of measures</li> <li>Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. (Link to mental and formal written methods)</li> </ul>
	5	Fractions, decimals, percentages (Link to all 4 operations)	<p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>Can I use and apply my knowledge of common multiples to simplify fractions?</li> <li>Can I confidently compare and order fractions?</li> <li>Can I add and subtract fractions?</li> <li>Can I multiply fractions by fractions?</li> <li>Can I multiply fractions by whole numbers?</li> <li>Can I divide proper fractions by whole numbers?</li> </ul>
	5	Calculation (Link to measures)	<p style="text-align: center;"><u>Y6</u></p> <ul style="list-style-type: none"> <li>Use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>I can multiply 3 and 4 digit numbers by 2 digit numbers</li> <li>I can divide 3 and 4 digit numbers by 2 digit numbers</li> <li>Have confident formal written and mental strategies for all four operations</li> </ul>
	5	Algebra (Link to all 4 operations)	<p style="text-align: center;"><u>(Not explicitly covered in year 5 curriculum)</u></p> <p style="text-align: center;"><u>Y6</u></p> <p>Can I show that I understand the use of symbols and letters to represent variables and unknowns e.g:</p> <ul style="list-style-type: none"> <li>missing numbers, lengths, coordinates and angles</li> <li>formulae in mathematics and science</li> <li>arithmetical rules (e.g. <math>a + b = b + a</math>)</li> <li>generalisations of number patterns</li> <li>number puzzles (e.g. what two numbers can add up to).</li> </ul>
Summer 2 7 weeks	Flexible	Transition units – using and applying core skills	<p>Place Value</p> <ul style="list-style-type: none"> <li>Can I demonstrate, when calculating, that I have a secure working knowledge of place value of numbers up to 10,000,000?</li> <li><i>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals</i></li> </ul> <p>Calculation</p> <ul style="list-style-type: none"> <li>Solve problems involving addition, subtraction, multiplication and division</li> <li>Use their knowledge of the order of operations to carry out calculations involving the four operations</li> <li>Use rounding and mental calculation skills to make approximations for written calculations</li> <li>Perform mental calculations, including with mixed operations and large numbers</li> </ul>



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			<ul style="list-style-type: none"><li>• Have confident formal written strategies for all four operations</li></ul>
	Flexible	Gap filling	Use this time to consolidate any key domains that the cohort are not secure with or would benefit from having more time on.