

## Year 5 Maths Overview

The principles of Fluency, Problem Solving and Reasoning will be threaded throughout each unit.

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
<b>Autumn</b>	<b>Place Value</b> Previous – Roman numerals to 100; read, write and order 4-digit numbers; Round to 10, 100 and 1000, Count in 1000s and 25s; negative numbers. <ul style="list-style-type: none"> <li>Read and write numbers to 10,000</li> <li>Recap adding and subtracting 10, 100 and 1000</li> <li>Read and write Roman Numerals to 1000</li> <li>Round to 10, 100 and 1000 up to 10,000</li> <li>Read, write and understand numbers to 100,000</li> <li>Compare and order numbers to 100,000</li> <li>Round to the nearest 10, 100, 1000 and 10,000 with numbers to 100,000</li> <li>Read, write and understand numbers to 1,000,000</li> <li>Count forwards and backwards in powers of 10 to 1,000,000</li> <li>Compare and order numbers to 1,000,000</li> <li>Round numbers to the nearest 10, 100, 1000, 10,000 and 100,000 to 1 million.</li> <li>Count forwards and backwards including negative numbers</li> <li>Know the difference between positive and negative numbers</li> <li>Simple addition and subtraction involving negative numbers (in terms of less and more)</li> </ul>			<b>Addition and Subtraction</b> Previous – Adding and subtracting 4 digit numbers using expanded method; mentally adding and subtracting multiples of 10, 100 and 1000. <ul style="list-style-type: none"> <li>Add numbers up to 1,000,000 using compact column method</li> <li>Subtract numbers up to 1,000,000 using compact column method</li> <li>Use knowledge of rounding to estimate and approximate answers</li> <li>Use inverse operations to check answers</li> <li>Solve missing numbers and inverse problems, e.g I think of a number...</li> <li>Solve multi-step problems using addition and subtraction</li> </ul>		<b>Multiplication and Division</b> Previous – Children know all multiplication and division facts to 12x 12, can multiply 3 numbers, multiply and divide by 100, factor pairs and multiples, multiply and divide to 3-digits using formal methods <ul style="list-style-type: none"> <li>Understand multiples</li> <li>Look for patterns to identify multiples</li> <li>Find common multiples</li> <li>Identify factors and factor pairs</li> <li>Use patterns to identify factors.</li> <li>Find common factors</li> <li>Understand and identify prime numbers</li> <li>Understand and identify square numbers</li> <li>Introduce correct notation</li> <li>Understand cube numbers</li> <li>Identify correct notation</li> <li>Multiply numbers by 10, 100 and 1000</li> <li>Divide numbers by 10, 100 and 1000</li> <li>Multiply and Divide with multiples of 10, 100 and 1000</li> </ul>		<b>Statistics</b> Previous – tables, pictograms, bar charts and line graphs, range of scales, collecting and presenting information, answering problems by comparing data. 24 hour time. <ul style="list-style-type: none"> <li>Read and interpret line graphs</li> <li>Draw line graphs</li> <li>Experiment with different scales</li> <li>Solve problems involving line graphs</li> <li>Read and interpret tables</li> <li>Two-way tables</li> <li>Read and interpret timetables</li> </ul>		<b>Area and Perimeter</b> Previous – perimeters of rectangles and compound shapes, can find missing lengths, find and compare area by counting squares. <ul style="list-style-type: none"> <li>Measure perimeter using ruler</li> <li>Measure rectangular shapes</li> <li>Measure more complex shapes</li> <li>Calculate perimeter from given sides in compound shapes</li> <li>Find missing lengths to find perimeter in compound shapes</li> <li>Recap finding area by counting squares</li> <li>Find area by using <math>l \times w</math> formula</li> <li>Find the area of compound shapes</li> <li>Find the area of irregular shapes (using grids to support estimation)</li> </ul>		<b>Assessment</b>	<b>Mop up</b>	<b>Investigations</b>	
<b>Spring</b>	<b>Multiplication and Division</b> Previous – Children know all multiplication and division facts to 12x 12, multiply and divide to 3-digits using formal methods <ul style="list-style-type: none"> <li>Multiply numbers mentally using known facts</li> <li>Divide numbers mentally using known facts</li> <li>Multiply 4 digits by 1 digit</li> <li>Include use of zero and understand effect</li> <li>Multiply 2 2-digit numbers using equipment and area model</li> <li>Multiply 2 2-digits using formal method</li> <li>Multiply 3-digits by 2-digits</li> <li>Multiply 4-digits by 2-digits</li> <li>Divide 4-digits by 1-digit (no remainders)</li> <li>Divide 4-digit by 1-digit (remainders)</li> <li>Solve problems involving addition and subtraction, multiplication and division and a combination of these, including the use of the equals sign (balancing questions)</li> </ul>			<b>Fractions</b> Previous – Find unit and non-unit parts of an amount, add and subtract fractions with the same denominator, find equivalent fractions, simplify <ul style="list-style-type: none"> <li>Recap children’s understanding of equivalent fractions using models and images.</li> <li>Convert improper fractions to mixed numbers</li> <li>Convert mixed numbers to improper fractions</li> <li>Count up and down in a given fraction</li> <li>Find a missing number in a number sequence</li> <li>Compare and order non-unit fractions <b>less than one</b> where denominators are multiples and not.</li> <li>Compare and order non-unit fractions <b>more than one</b> where denominators are multiples and not.</li> <li>Recap adding and subtracting fractions with same denominator</li> <li>Add fractions within one where denominators are multiples</li> <li>Add 3 or more fractions where denominators are multiples.</li> <li>Add fractions giving a total of more than one – convert answers to mixed numbers</li> <li>Add mixed numbers</li> <li>Subtract fractions where denominators are multiples</li> <li>Subtract a fraction from a mixed number (not breaking the whole)</li> <li>Subtract a fraction from a mixed number where the whole is broken down.</li> <li>Subtract two mixed numbers</li> <li>Multiply a unit fraction by a whole number</li> <li>Multiply a non-unit fraction by a whole number</li> <li>Multiply a mixed number by a whole number</li> <li>Find unit and non-unit fractions of higher multiples</li> <li>Understand fractions as operators and their link to fractions of amounts e.g <math>5 \times \frac{3}{5}</math></li> <li>Solve problems involving multiplication and division, including scaling by fractions and problems involving rates.</li> </ul>					<b>Decimals and Percentages</b> Previous – Recognise tenths and hundredths as decimals, compare and order decimals to 2 DP, Round 1DP to whole number. <ul style="list-style-type: none"> <li>Know place value of decimals to 2DP</li> <li>Convert fractions to decimals using concrete and pictorial representations</li> <li>Convert between fractions and decimals above 1</li> <li>Understand thousandths as a fraction</li> <li>Understand thousandths as a decimal</li> <li>Round decimals to 1,2 and 3DP to whole</li> <li>Round decimals with 2 and 3DP to tenths</li> <li>Order and compare decimals up to 3DP</li> <li>Understand percentages out of 100</li> <li>Link percentages to fractions and decimals</li> <li>Find equivalents between fractions, decimals and percentages</li> <li>Solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math>, <math>\frac{1}{4}</math>, <math>\frac{1}{5}</math>, <math>\frac{4}{5}</math> and <math>\frac{4}{5}</math>, as well as fractions with denominator a multiple of 10 or 25.</li> </ul>		<b>Assessment</b>	<b>Mop up</b>			
<b>Summer</b>	<b>Decimals</b> <ul style="list-style-type: none"> <li>Add decimals within a whole, understanding place value</li> <li>Subtract decimals within a whole, understanding the place value</li> <li>Find complements to 1 whole up to 3DP</li> <li>Look for complements when adding mentally.</li> <li>Add decimals with the same DP</li> <li>Add decimals with different DP</li> <li>Subtract decimals with the same DP</li> <li>Subtract decimals with different DP</li> </ul>			<b>Shape</b> Previous – Identifying and comparing angles, names and properties of triangles and quadrilaterals, lines of symmetry <ul style="list-style-type: none"> <li>Recap types of angles and turns</li> <li>Introduce reflex angles</li> <li>Identify angles such as 45°, 135°, 270° using existing knowledge</li> <li>Introduce a protractor</li> <li>Measure acute angles with a protractor</li> <li>Measure obtuse angles with a protractor</li> <li>Draw lines to the nearest mm</li> </ul>			<b>Converting Measures (incl. Time)</b> Previous – Knows metric units for all measures, convert from larger units to smaller, read timetables <ul style="list-style-type: none"> <li>Understand term ‘kilo’</li> <li>Convert m to Km and g to Kg and vice versa</li> <li>Understand term ‘milli’</li> <li>Convert from m to mm and l to ml and vice versa</li> </ul>		<b>Position and Direction</b> Previous – coordinates in the first quadrant, translating a point <ul style="list-style-type: none"> <li>Read and plot coordinates in the first quadrant</li> </ul>		<b>Volume</b> <ul style="list-style-type: none"> <li>Understand volume</li> <li>Compare volume</li> <li>Estimate volume</li> <li>Estimate capacity</li> </ul>		<b>Assessment</b>	<b>Mop up</b>	<b>Investigations</b>

	<ul style="list-style-type: none"> <li>• Add and subtract decimals and whole numbers</li> <li>• Continue decimal sequences and find missing numbers</li> <li>• Predict terms in decimal sequences</li> <li>• Multiply decimals by 10, 100 and 1000</li> <li>• Divide decimals by 10, 100 and 1000</li> </ul>	<ul style="list-style-type: none"> <li>• Draw angles to 5°</li> <li>• Construct a triangle from the length of 2 sides and the angle between them.</li> <li>• Find missing angles in a straight-line</li> <li>• Find missing angles around a point</li> <li>• Identify lengths and angles in a shape, on a grid</li> <li>• Identify regular and irregular polygons</li> <li>• Identify 3D shapes from their nets, properties, plans and elevations</li> </ul>	<ul style="list-style-type: none"> <li>• Convert between different metric units</li> <li>• Introduce imperial measurements</li> <li>• Approximate conversions between metric and imperial</li> <li>• Convert between different units of time</li> <li>• Read and interpret timetables</li> <li>• Use all 4 operations to solve problems involving measure</li> </ul>	<ul style="list-style-type: none"> <li>• Reflect shapes in a horizontal/vertical mirror line</li> <li>• Reflection with coordinates</li> <li>• Translate a shape</li> <li>• Translate with coordinates</li> </ul>				
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