

# Lingfield Education Trust

## Maths Medium-Term Plan & Small Steps: Year 6

### Autumn Term

	Place Value	Position & Direction	Four Operations	Statistics & Circles	Fractions A	Fractions B	Assessment
	4 weeks	1 week	3 weeks	1 week	3 weeks	2 weeks	1 week
National Curriculum	<ul style="list-style-type: none"> <li>Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit</li> <li>Round any whole number to a required degree of accuracy</li> <li>Use negative numbers in context, and calculate intervals across zero</li> </ul>	<ul style="list-style-type: none"> <li>Describe positions on the full coordinate grid (all four quadrants)</li> <li>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes</li> </ul>	<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>Solve problems involving addition, subtraction, multiplication and division</li> <li>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy</li> <li>Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication</li> <li>Perform mental calculations, including with mixed operations and large numbers</li> <li>Divide numbers up to four digits by a 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context</li> <li>Divide numbers up to four digits by a 2-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</li> </ul>	<ul style="list-style-type: none"> <li>Interpret and construct pie charts and line graphs and use these to solve problems</li> <li>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (Year 4)</li> <li>Calculate and interpret the mean as an average</li> <li>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius</li> </ul>	<ul style="list-style-type: none"> <li>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination</li> <li>Compare and order fractions, including fractions &gt; 1</li> <li>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</li> <li>Identify common factors, common multiples and prime numbers</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> </ul>	<ul style="list-style-type: none"> <li>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Y5)</li> <li>Multiply simple pairs of proper fractions, writing the answer in its simplest form</li> <li>Divide proper fractions by whole numbers</li> </ul>	<ul style="list-style-type: none"> <li>Test to be made by Maths lead to match what has been taught – do <b>not</b> just use WR</li> <li>End of Term Tests</li> <li>Day 1 do arithmetic test</li> <li>Day 2 go over and unpick the arithmetic test with loads of discussion – this <b>must</b> be given proper time</li> <li>Days 3 do reasoning test</li> <li>Day 4 go over and unpick the reasoning test with loads of discussion – this <b>must</b> be given proper time</li> </ul>
Small Steps	<ul style="list-style-type: none"> <li>Represent and know value of digits to 8-digit</li> <li>Partition numbers to 8-digit</li> <li>1, 10, 100, 1000, 10,000, 100,000 more</li> <li>Compare two numbers using &lt; &gt; = to 8-digit</li> <li>Order sets of numbers to 8-digit</li> <li>Round 4-digit numbers to nearest 10, 100, 1000</li> <li>Round to nearest 10, 100, 1000 within 8-digit</li> <li>Round to any digit</li> <li>Increases and decreases through zero</li> <li>Differences between numbers including +/-</li> </ul>	<ul style="list-style-type: none"> <li>Read coordinates in all 4 quadrants then plot in all 4</li> <li>Translations and coordinates</li> <li>Reflections and coordinates</li> </ul>	<p><b>From Calculation Policy 1<sup>st</sup> NOT WR &amp; Do CPA lessons</b></p> <ul style="list-style-type: none"> <li>Add whole numbers beyond 1 million</li> <li>Subtract whole numbers beyond 1 million</li> <li>Short multiplication</li> <li>Long multiplication</li> <li>Short division</li> <li>Long division – 3 lessons</li> <li>Approximation to check</li> <li>Inverse to check</li> <li>Order of operations</li> </ul>	<ul style="list-style-type: none"> <li>Dual bar charts</li> <li>Line charts</li> <li>Pie charts</li> <li>Circles</li> <li>The mean</li> </ul>	<p><b>From policy for fraction calculating methods – must be school consistency!</b></p> <ul style="list-style-type: none"> <li>Square Numbers &amp; Cube Numbers</li> <li>Prime Numbers</li> <li>Use common factors to simplify</li> <li>Use common denominators to express in same denominator</li> <li>Compare and order fractions</li> <li>Add fractions</li> <li>Add mixed numbers</li> <li>Subtract fractions</li> <li>Subtract mixed numbers</li> </ul>	<p><b>From policy for fraction calculating methods – must be school consistency!</b></p> <ul style="list-style-type: none"> <li>Multiply fractions by integers</li> <li>Multiply fractions by fractions</li> <li>Divide a fraction by an integer</li> <li>Find fractions of amounts</li> </ul>	
Enrichment	Block Opener/Assembly on Careers linked to unit	Block Opener/Assembly on Careers linked to unit	Block Opener/Assembly on Careers linked to unit  World Statistics Day (20.10.23)	Block Opener/Assembly on Careers linked to unit  Lingfield Education Trust TTRS Competition (16-20.10.23)	Block Opener/Assembly on Careers linked to unit  WR Barvember (November)	Block Opener/Assembly on Careers linked to unit  Lingfield Education Trust TTRS Competition (11-15.12.23)	LET Christmas Problems & Puzzles

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### Maths Medium-Term Plan Small Steps: Year 6

#### Spring Term

	Decimals	FDP	Ratio	Algebra	Measures	Area, Perimeter, Volume	Assessment
	2 weeks	2 weeks	2 weeks	2 weeks	1 week	2 weeks	1 week
National Curriculum	<ul style="list-style-type: none"> <li>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</li> <li>Solve problems which require answers to be rounded to specified degrees of accuracy</li> <li>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</li> <li>Multiply 1-digit numbers with up to 2 decimal places by whole numbers</li> <li>Use written division methods in cases where the answer has up to 2 decimal places</li> <li>Solve problems involving addition, subtraction, multiplication and division</li> </ul>	<ul style="list-style-type: none"> <li>Use common factors to simplify fractions; use common multiples to express fractions in the same denominator</li> <li>Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction</li> <li>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts</li> <li>Compare and order fractions, including fractions &gt;1</li> <li>Solve problems involving the calculation of percentages and the use of percentages for comparison</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts</li> <li>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples</li> <li>Solve problems involving similar shapes where the scale factor is known or can be found</li> </ul>	<ul style="list-style-type: none"> <li>Use simple formulae</li> <li>Generate and describe linear number sequences</li> <li>Find pairs of numbers that satisfy an equation with two unknowns</li> <li>Enumerate possibilities of combinations of two variables</li> <li>Express missing number problems algebraically</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate</li> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>Recognise that shapes with the same areas can have different perimeters and vice versa</li> <li>Recognise when it is possible to use formulae for area and volume of shapes</li> <li>Calculate the area of parallelograms and triangles</li> <li>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units</li> </ul>	<ul style="list-style-type: none"> <li>Test to be made by Maths lead to match what has been taught – do <b>not</b> just use WR End of Term Tests</li> <li>Day 1 do arithmetic test</li> <li>Day 2 go over and unpick the arithmetic test with loads of discussion – this <b>must</b> be given proper time</li> <li>Days 3 do reasoning test</li> <li>Day 4 go over and unpick the reasoning test with loads of discussion – this <b>must</b> be given proper time</li> </ul>
Small Steps	<ul style="list-style-type: none"> <li>Place value to 3dp</li> <li>Round decimals</li> <li>Add and subtract decimals</li> <li>Multiply decimals by 10, 100, 1000</li> <li>Divide decimals by 10, 100, 1000</li> <li>Multiply decimals by integers</li> <li>Divide decimals by integers</li> </ul>	<ul style="list-style-type: none"> <li>Decimal and fraction equivalence</li> <li>Fractions as decimals</li> <li>Understand percentages</li> <li>FDP equivalence</li> <li>Percentage of amounts – multiples of 10 and half and quarter</li> <li>Percentage of amounts – multiples of 5</li> </ul>	<ul style="list-style-type: none"> <li>Simple ratio tables</li> <li>Ratio problems using ratio tables</li> <li>Introducing the ratio symbol</li> <li>Ratio and fractions</li> <li>Use scale factors</li> <li>Similar shapes</li> </ul>	<ul style="list-style-type: none"> <li>1 and 2 step function machines</li> <li>Form expressions</li> <li>substitution</li> <li>formulae</li> <li>1 and 2 step equations</li> <li>Pairs of values</li> </ul>	<ul style="list-style-type: none"> <li>Metric measures</li> <li>Convert between metric measures</li> <li>Miles &amp; km</li> </ul>	<ul style="list-style-type: none"> <li>Area and perimeter of rectangles – embedded problems</li> <li>rectangles with same areas but different perimeters</li> <li>Area and perimeter of compound shapes – embedded problems</li> <li>Area of triangles – embedded problems</li> <li>Area of parallelograms – embedded problems</li> <li>Volume counting squares – embedded problems</li> <li>Volume – formula – embedded problems</li> </ul>	
Enrichment	<p>Block Opener/Assembly on Careers linked to unit</p> <p>International Puzzle Day (29.01.24)</p>	<p>Block Opener/Assembly on Careers linked to unit</p> <p>NSPCC Number Day (02.02.24)</p> <p>Lingfield Education Trust TTRS Competition (05-09.02.24)</p>	<p>Block Opener/Assembly on Careers linked to unit</p> <p>World Maths Day (23.03.24)</p>	<p>Block Opener/Assembly on Careers linked to unit</p>	<p>Block Opener/Assembly on Careers linked to unit</p>	<p>Block Opener/Assembly on Careers linked to unit</p> <p>Lingfield Education Trust TTRS Competition (11-15.03.24)</p>	<p>LET Easter Problems &amp; Puzzles</p>

**Lingfield Education Trust**  
**Maths Medium-Term Plan Small Steps: Year 6**  
 Summer Term

	<b>Properties of Shape</b>	<b>Revision</b>	<b>Projects</b>
	2 weeks	2 weeks	7 weeks
<b>National Curriculum</b>	<ul style="list-style-type: none"> <li>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles</li> <li>Draw given angles, and measure them in degrees (°) (Y5)</li> <li>Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (Y5)</li> <li>Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons</li> <li>Draw 2-D shapes using given dimensions and angles</li> </ul>	SATs Revision	Best Value Profits & Losses Packaging Cooking White Rose Tours White Rose Futures  IMEI Calculator project ready for Y7
<b>Small Steps</b>	<ul style="list-style-type: none"> <li>Measure and classify angles using a protractor</li> <li>More measuring angles</li> <li>Calculate angles in a triangle</li> <li>Calculate angles in a quadrilateral</li> <li>Draw shapes</li> <li>Make nets</li> </ul>		
<b>Enrichment</b>	Block Opener/Assembly on Careers linked to unit  National Numeracy Day (15.05.24)	Lingfield Education Trust TTRS Competition  Women in Maths Day (12.05.24)  Lingfield Education Trust TTRS Competition (20-24.05.24)  Allow you pupils practice on the maths orienteering course this term ready for the competition next term.	My Money Week (12-16/6/24)  My Money Week (12-16.06.24)  Alan Turing Day (23.06.24)  Lingfield Education Trust TTRS Competition (01-05.07.24)  MP Maths Orienteering Competition for all year groups (01-05.07.24)  Lingfield Education Trust maths Challenge (12.07.24)