Lingfield Education Trust
Maths Medium-Term Plan: Year 6
Autumn Term

	Place Value	Position & Direction	Add, Subtract & BODMAS	Statistics & Circles	Multiplication & Unit Conversion	Assessment	Division & Unit Conversion
	4 weeks	2 weeks	1 weeks	1 week	3 weeks	1 week	3 weeks
National Curriculum	• Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit • Round any whole number to a required degree of accuracy • Use negative numbers in context, and calculate intervals across zero	• Describe positions on the full coordinate grid (all four quadrants) • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes	• Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • Solve problems involving addition, subtraction, multiplication and division • Use order of opertions	• Interpret and construct pie charts and line graphs and use these to solve problems • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs (Year 4) • Calculate and interpret the mean as an average • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	• Multiply multi-digit numbers up to four digits by a 2-digit whole number using the formal written method of long multiplication • Perform mental calculations, including with mixed • Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate • 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	• Monday: arithmetic paper • Tuesday: reasoning paper • Wednesday: fluency checks • Thursday: unpick arithmetic paper • Friday: unpick reasoning paper	• 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 • 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 • Solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate • 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
Small Steps	• Represent and know value of digits to 100,000,000 • Partition numbers to 1,000,000 • Value of digits to 100,000,000 • 1, 10, 100, 1000, 10,000, 100,000 more/less • Compare two numbers using < > = to 8-digit same PV • Compare two numbers with different PV • Order sets of numbers to 8-digit • PS lesson: PV, compare, order (more than one possibility) • Round 4-digit numbers to nearest 10, 100, 1000 • Round to nearest 10, 100, 1000 within 8-digit • Rounding practice • PS Lesson: rounding (multi-domain) • Negative number practical lesson • Increases through zero • Decreases through zero • Differences between numbers including +/- • PS Lesson: negative numbers (real-life word) • Assessment • Pause & Stretch • PS Skills Lesson: trial & improvement	• Read coordinates in all 4 quadrants • Plot coordinates in all 4 quadrants • Calculations with coordinates • Complete shapes on grids • Translations and coordinates • Reflections and coordinates • PS Lesson: coordinates (logic) • Assessment • Pause & Stretch	• Missing number equations (add and take mental methods) • Balancing equations (add and take mental methods) • Practice Lesson: column addition and subtraction • Order of Operations • Order of Operations	• Dual bar charts • Line charts • Pie charts • Circles • The mean • Assessment, Pause & Stretch	• Moving digits multiplication including decimals • Convert large metric units to small • Convert large metric units to small • PS Lesson: converting units large to small (multi-step / visual) • Short multiplication refresh including decimals • Long multiplication with no regroup • Long multiplication with one regroup • Long multiplication with two regroup • Long multiplication with multiple regroup • PS Lesson: long multiplication (all possibilities) • Factorising for multiplying by a 2-digit number • Most efficient method for multiplications • PS Lesson: multiplication • Assessment • Pause & stretch		• Moving digits division including decimals • Convert small metric units to large • Convert small metric units to large • PS Lesson: converting units small to large (working backwards) • Short division refresh including decimals • Short division with remainder as a decimal • Building multiple strings (fact bank) • Long division – no remainder – divisor smaller than first 2 digits of dividend • Long division –remainder – divisor smaller than first 2 digits of dividend • Long division – no remainder – divisor larger than first 2 digits of dividend • PS Lesson: long division (open-ended) • Factorising for dividing by a 2-digit number • Most efficient method for division • PS Lesson: division (multi-step / multi-domain) • Assessment • Pause & Stretch • PS Skills Lesson: working systematically

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Maths Medium-Term Plan: Year 6
Spring Term

	Fractions & FDP	Ratio	Algebra	Assessment	Shape, Perimeter, Area & Volume
	6 weeks	2 weeks	1 week	1 week	3 weeks
National Curriculum	• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions > 1 • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • Identify common factors, common multiples and prime numbers • Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • Solve problems involving the calculation of percentages and the use of percentages for comparison • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (Y5) • Multiply simple pairs of proper fractions, writing the answer in its simplest form • Divide proper fractions by whole numbers	• 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 unequal sharing and grouping using knowledge of fractions and multiples • Solve problems involving similar shapes where the scale factor is known or can be found	• Use simple formulae • Generate and describe linear number sequences • Find pairs of numbers that satisfy an equation with two unknowns • Enumerate possibilities of combinations of two variables Express missing number problems algebraically	• Monday: arithmetic paper • Tuesday: reasoning paper • Wednesday: fluency checks • Thursday: unpick arithmetic paper • Friday: unpick reasoning paper	• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles • Draw given angles, and measure them in degrees (°) (Y5) • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (Y5) • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons • Draw 2-D shapes using given dimensions and angles • Recognise that shapes with the same areas can have different perimeters and vice versa • Recognise when it is possible to use formulae for area and volume of shapes • Calculate the area of parallelograms and triangles • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units
Small Steps	• Common Factors • Simplifying • Common multiples • Comparing & ordering fractions • PS Lesson: common denominators (visual) • Adding fractions with different denominators • Adding mixed numbers with different denominators • Practice Lesson: adding fractions • Subtracting fractions • Subtracting mixed numbers • Practice Lesson: subtracting fractions including order of operations with fractions • PS Lesson: adding and subtracting fractions (multi-step / multi-domain) • Multiply fractions by integers • Multiply fractions by larger integers • Multiply fractions by fractions • Divide a fraction by integer (numerator-divisor match) • Divide a fraction by integer • Practice Lesson: dividing fractions • PS Lesson: multiplying and dividing fractions (visual) • Fraction and decimal equivalence to tenths • Fraction and decimal equivalence to hundredths • FD Equivalence Via Dividing • Percentages of amounts multiples of 25%, 50%, 75% • Percentages of amounts multiples of 10% • Percentages of amounts multiples of 5% • Percentages of amounts 1% • Most efficient method for percentages • PS Lesson: percentages of amounts (real-life word / working backwards) • FDP Equivalence • Assessment, Pause & Stretch	• Practical with Numicon • Language of ratio – simplest form • Language of ratio – scaling up • PS Lesson: ratio problems (real-life word / multi-step) • Scale Drawings • Scale Factors • Assessment, Pause & Stretch • PS Skills Lesson: working collaboratively	• 1 and 2 step function machines • Form expressions • substitution • formulae • 1 and 2 step equations • Pairs of values • Assessment, Pause & Stretch • PS Skills Lesson: finding starting points		• Measure and classify angles using a protractor • More measuring angles • Calculate angles in a triangle • Calculate angles in a quadrilateral • Draw shapes • Make nets • Area and perimeter of rectangles – embedded problems • rectangles with same areas but different perimeters • Area and perimeter of compound shapes – embedded problems • Area of triangles – embedded problems • Area of parallelograms – embedded problems • Volume counting squares – embedded problems • Volume – formula – embedded problems

Revision & Individual Pathways	SATs	Projects
2 weeks	1 week	10 weeks

National Curriculum

		Best Value
		Profits & Losses
		Packaging
		Cooking
SATs Revision	SATs	White Rose Tours
		White Rose Futures

Small Steps

IMEI Calculator project ready for Y7