

Lingfield Education Trust
Maths Medium-Term Plan: Year 5
 Autumn Term

	Place Value	Negative Numbers	Position & Direction	Addition & Subtraction	Multiplication & Division	Assessment	Perimeter & Area
	2 weeks	2 weeks	2 weeks	2 weeks	3 weeks	1 week	2 weeks
National Curriculum	<ul style="list-style-type: none"> Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 Solve number problems and practical problems involving the above 	<ul style="list-style-type: none"> Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Add and subtract whole numbers with more than four digits, including using formal written methods (columnar addition and subtraction) Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy 	<ul style="list-style-type: none"> Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 Multiply numbers up to four digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers Divide up to four digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes 	<ul style="list-style-type: none"> Monday: arithmetic paper Tuesday: reasoning paper Wednesday: fluency checks Thursday: unpick arithmetic paper Friday: unpick reasoning paper 	<ul style="list-style-type: none"> Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes
Small Steps	<ul style="list-style-type: none"> Represent and know value of digits to 1,000,000 Partition numbers to 1,000,000 Value of digits to 1,000,000 1, 10, 100, 1000, 10,000, 100,000 more/less Compare two numbers using < > = to 7-digit Order sets of numbers to 7-digit PS Lesson: compare, order (all possibilities) Round 4-digit numbers to nearest 10, 100, 1000 Round to nearest 10, 100, 1000 within 7-digit PS Lesson: rounding (multi-domain) Assessment, Pause & Stretch 	<ul style="list-style-type: none"> Understand counting through zero into negative numbers including number line in ones Count through zero in other multiples Compare and order numbers including negative numbers Increases through zero Decreases through zero Find the difference PS Lesson: negative numbers (visual) Assessment Pause & Stretch 	<ul style="list-style-type: none"> Read coordinates in the first quadrant Plot coordinates in the first quadrant PS Lesson: coordinates (multi-step) Translate a shape including coordinates Describe a translation including coordinates PS Lesson: translation (logic) Reflections including coordinates Assessment Pause & Stretch PS Skills Lesson: trial & improvement 	<ul style="list-style-type: none"> Column addition of 4-digit numbers no bridging then bridging including VF Column addition of 5-digit or more numbers with bridging including VF Column addition of mixed PV numbers with bridging including VF PS Lesson: column addition (multistep / multi-domain) Column subtract of 4-digit numbers no exchanging then exchanging including VF Column subtract of 5-digit or more numbers with exchanging including VF Column subtract of mixed PV numbers with exchanging including VF PS Lesson: column subtraction (working backwards) Estimate/approximate to check Inverse to check Assessment, Pause & Stretch 	<ul style="list-style-type: none"> Multiply by 10, 100, 1000 Divide by 10, 100, 1000 Mixed multiply and divide by 10, 100, 1000 PS Lesson: multiply & divide by 10, 100, 1000 (rules and patterns) Multiply 4 x 1 short Multiply 2 x 2 long Multiply 3 x 2 long Multiply 4 x 2 long PS Lesson: columnar multiplication (multi-step / real-life word) Divide 4 by 1 using short no remainders at all including within Divide 4 by 1 using short remainder only at end Divide 4 by 1 using short remainder throughout PS Lesson: short division (multi-step / real-life word) Assessment Pause & Stretch 	<ul style="list-style-type: none"> Perimeter of rectangles Perimeter of compound rectilinear shapes Perimeter of polygons PS Lesson: perimeter (more than one possibility) Area of rectangles Area of compound shapes PS Lesson: area (all possibilities) Assessment Pause & Stretch PS Skills Lesson: working systematically 	

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 Spring Term

	Volume	Fractions	Statistics	Assessment	Measurement
	1 week	7 weeks	2 weeks	1 week	2 weeks
National Curriculum	<ul style="list-style-type: none"> Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity Estimate volume and capacity [for example, using water] 	<ul style="list-style-type: none"> Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 1 Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number Compare and order fractions whose denominators are all multiples of the same number Add and subtract fractions with the same denominator, and denominators that are multiples of the same number Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number (Y4) 	<ul style="list-style-type: none"> Complete, read and interpret information in tables, including timetables Solve comparison, sum and difference problems using information presented in a line graph 	<ul style="list-style-type: none"> Monday: arithmetic paper Tuesday: reasoning paper Wednesday: fluency checks Thursday: unpick arithmetic paper Friday: unpick reasoning paper 	<ul style="list-style-type: none"> Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
Small Steps	<ul style="list-style-type: none"> Count volume using cubes Compare volumes PS Lesson: volume (visual) Assessment Pause & Stretch 	<ul style="list-style-type: none"> Multiples then common multiples factors Common factors PS Lesson: multiples and factors (all possibilities) Prime numbers Square numbers & cube numbers Find fractions equivalent to a unit fraction – use as fractions reminder session Find fractions equivalent to a non-unit fraction Convert improper to mixed Convert mixed to improper PS Lesson: mixed & improper (open-ended) Compare and order fractions less than one Compare and order fractions more than one Add and subtract fractions with same denominator (mixed lesson as Y4 revision) Add fractions with diff denom within 1 Add fractions with diff denom beyond 1 Add a fraction to a mixed number Add 2 mixed numbers PS Lesson: adding fractions (open-ended) Subtract fractions with diff denom Subtract fraction from mixed Subtract two mixed numbers PS Lesson: subtracting fractions (multi-step) Multiply fractions by integers Multiply a mixed number by an integer PS Lesson: multiplying fractions (multi-step) Fractions of amounts – table fact based Fractions of amounts – scaled fact based PS Lesson: fractions of amounts (real-life word) Assessment, Pause & Stretch PS Skills Lesson: working collaboratively 	<ul style="list-style-type: none"> Read and interpret tables Read and interpret two way tables Read and interpret timetables PS Lesson: timetables (open-ended) Draw line graphs Read and interpret line graphs PS Lesson: line charts (open-ended) Assessment Pause & Stretch 	<ul style="list-style-type: none"> Kilograms and kilometres Millimetres and millilitres Converting units PS Lesson: converting units (real-life word) Units of time PS Lesson: units of time (multi-domain) Converting with imperial units Assessment Pause & Stretch 	

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Maths Medium-Term Plan: Year 5
 Summer Term

	Decimals & Percentages	Properties of Shape	Assessment	Time	Summer Springboard
	4 weeks	3 weeks	1 week	2 weeks	1 week
National Curriculum	<ul style="list-style-type: none"> Read, write, order and compare numbers with up to 3 decimal places Read and write decimal numbers as fractions Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents Solve problems involving numbers up to 3 decimal places Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place Recognise the per cent symbol (%) and understand that per cent relates to "number of parts per 100", and write percentages as a fraction with denominator 100, and as a decimal fraction 	<ul style="list-style-type: none"> 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 and 1 whole turn (total 360°) Identify: angles at a point and 1 whole turn (total 360°); angles at a point on a straight line and half a turn (total 180°) 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 Identify 3-D shapes, including cubes and other cuboids, from 2-D representations 	<ul style="list-style-type: none"> Monday: arithmetic paper Tuesday: reasoning paper Wednesday: fluency checks Thursday: unpick arithmetic paper Friday: unpick reasoning paper 	<ul style="list-style-type: none"> Read Roman numerals to 1,000 (M) and recognise years written in Roman numerals Solve problems involving converting between units of time Convert units of time Calculate with timetables 	<ul style="list-style-type: none"> Revisit key place value, operations and fractions skills before summer break be given proper time
Small Steps	<ul style="list-style-type: none"> Decimals to 2dp Equivalent fractions and decimals tenths Equivalent fractions and decimals hundredths PS Lesson: decimal & fraction equivalence (visual) Thousandths as fractions and decimals Order and compare decimals same amount of PV places Order and compare decimals any amount of PV places PS Lesson: order and compare decimals (real-life word) Round decimals to wholes and tenths PS Lesson: rounding decimals (logic) Understand percentages & Percentages as fractions Percentages as decimals FDP Equivalence PS Lesson: FDP equivalence (visual) Multiply decimals by 10, 100, 1000 Divide decimals by 10, 100, 1000 Add decimals including with different PV Subtract Decimals with different PV PS lesson: add and Subtract decimals (multi-step / multi-domain) Assessment, Pause & Stretch PS Skills Lesson: finding starting points 	<ul style="list-style-type: none"> Degrees and classify angles Estimate and measure angles up to 180 Draw lines accurately – teacher assess 22 Calculate angles within right angles Calculate angles on a straight line Calculate angles around a point Lengths and angles in shapes Regular and irregular polygons – teacher assess 21 3d shapes PS Lesson: 2D and 3D shapes (investigations / rules and patterns) Assessment Pause & Stretch PS Skills Lesson: visualising 		<p>Roman Numerals</p> <ul style="list-style-type: none"> Calculate time durations from given start and end Calculate finish time from given start and duration Calculate start from given end and duration PS Lesson: time (real-life word) Assessment, Pause & Stretch PS Skills Lesson: conjecturing & visualising 	