

Marlon Manor
Maths Medium-Term Plan & Small Steps: Year 6
Autumn Term



	Place Value 4 weeks	Four Operations 6 weeks	Fractions 5 weeks
National Curriculum	<ul style="list-style-type: none"> 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 Solve number and practical problems that involve the above 	<ul style="list-style-type: none"> 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 estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy Identify common factors, common multiples and prime numbers 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 operations and large numbers 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 	<ul style="list-style-type: none"> 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 Identify common factors, common multiples and prime numbers 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 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 Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions Solve problems involving addition, subtraction, multiplication and division Associate a fraction with division and calculate decimal fraction equivalents
Small Steps	Step 1 Numbers to 1,000,000 Step 2 Numbers to 10,000,000 Step 3 Read and write numbers to 10,000,000 Step 4 Powers of 10 Step 5 Number line to 10,000,000 Step 6 Compare and order any integers PS Lesson Assessment 1: Pause & Stretch Step 7 Round any integer PS Lesson Assessment 6: Pause & Stretch Step 8 Negative numbers PS Lesson Assessment 14: Pause & Stretch	Step 1 Add and subtract integers Step 2 Common factors Step 3 Common multiples Step 4 Rules of divisibility Step 5 Primes to 100 Step 6 Square and cube numbers Step 7 Multiply up to a 4-digit number by a 2-digit number Step 8 Solve problems with multiplication Step 9 Short division Step 10 Division using factors Step 11 Introduction to long division Step 12 Long division with remainders Step 13 Solve problems with division Step 14 Solve multi-step problems Step 15 Order of operations Step 16 Mental calculations and estimation Step 17 Reason from known facts PS Lesson Assessment 3: Pause & Stretch	Step 1 Equivalent fractions and simplifying Step 2 Equivalent fractions on a number line Step 3 Compare and order (denominator) Step 4 Compare and order (numerator) PS Lesson Assessment 4: Pause & Stretch Step 5 Add and subtract simple fractions Step 6 Add and subtract any two fractions Step 7 Add mixed numbers Step 8 Subtract mixed number PS Lesson Assessment 7: Pause & Stretch Step 9 Multi-step problems Step 1 Multiply fractions by integers Step 2 Multiply fractions by fractions Step 3 Divide a fraction by an integer Step 4 Divide any fraction by an integer Step 5 Mixed questions with fractions Step 6 Fraction of an amount Step 7 Fraction of an amount – find the whole PS Lesson Assessment 8: Pause & Stretch
Enrichment	Block Opener/Assembly on Careers linked to unit	Block Opener/Assembly on Careers linked to unit	

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 Spring Term



	Decimals	FDP	Ratio	Algebra	Area, Perimeter, Volume	Statistics
	2 weeks	2 weeks	2 weeks	2 weeks	1 week	1 week
National Curriculum	<ul style="list-style-type: none"> 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 Solve problems which require answers to be rounded to specified degrees of accuracy Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Multiply 1-digit numbers with up to 2 decimal places by whole numbers Use written division methods in cases where the answer has up to 2 decimal places Solve problems involving addition, subtraction, multiplication and division 	<ul style="list-style-type: none"> Use common factors to simplify fractions; use common multiples to express fractions in the same denomination 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 Compare and order fractions, including fractions >1 Solve problems involving the calculation of percentages and the use of percentages for comparison 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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
Small Steps	<ul style="list-style-type: none"> Place value to 3dp Round decimals Add and subtract decimals Multiply decimals by 10, 100, 1000 Divide decimals by 10, 100, 1000 PS Lesson Assessment 10: Pause & Stretch Multiply decimals by integers Divide decimals by integers PS Lesson Assessment 11: Pause & Stretch 	<ul style="list-style-type: none"> Decimal and fraction equivalence Fractions as decimals Understand percentages FDP equivalence Percentage of amounts – multiples of 10 and half and quarter Percentage of amounts – multiples of 5 PS Lesson Assessment 5: Pause & Stretch 	<ul style="list-style-type: none"> Simple ratio tables Ratio problems using ratio tables Introducing the ratio symbol Ratio and fractions Use scale factors Similar shapes PS Lesson Assessment 13: Pause & Stretch 	<ul style="list-style-type: none"> 1 and 2 step function machines Form expressions substitution formulae 1 and 2 step equations Pairs of values PS Lesson Assessment 16: Pause & Stretch 	<ul style="list-style-type: none"> 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 PS Lesson Assessment 18: Pause & Stretch 	<ul style="list-style-type: none"> Step 1 Line graphs Step 2 Dual bar charts Step 3 Read and interpret pie charts Step 4 Pie charts with percentages Step 5 Draw pie charts PS Lesson Assessment 24: Pause & Stretch Step 6 The mean PS Lesson Assessment 25: Pause & Stretch
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>

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 Summer Term



	Properties of Shape	Position & Direction	Revision	Projects
	2 weeks	2 weeks	2 weeks	7 weeks
National Curriculum	<ul style="list-style-type: none"> 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 	<p>Describe positions on the full coordinate grid (all four quadrants)</p> <p>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes</p>	SATs Revision	Best Value Profits & Losses Packaging Cooking White Rose Tours White Rose Futures IMEI Calculator project ready for Y7
Small Steps	Step 1 Measure and classify angles Step 2 Calculate angles Step 3 Vertically opposite angles Step 4 Angles in a triangle Step 5 Angles in a triangle – special cases Step 6 Angles in a triangle – missing angles Step 7 Angles in a quadrilateral Step 8 Angles in polygons Step 9 Circles Step 10 Draw shapes accurately Step 11 Nets of 3-D shapes <ul style="list-style-type: none"> PS Lesson Assessment 20: Pause & Stretch 	Step 1 The first quadrant Step 2 Read and plot points in four quadrants Step 3 Solve problems with coordinates Step 4 Translations Step 5 Reflections <ul style="list-style-type: none"> PS Lesson Assessment 23: Pause & Stretch 		
Enrichment	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.		