

Maths Medium Term Plan

Year 6 2024-2025

Autumn 1

Link to WRM Planning: <https://whiteroseeducation.com/resources?year=year-6-new&subject=maths>

Week	Week Beginning	Unit	Small Steps	N.C. Links	Enriching our Mathematicians	Notes / AOI
1-8		Maths Skills	Arithmetic focus on numbers, multiples and factors etc.			2 times a week
1-8		NSM Times Tables Programme	Follow the updated TBPS programme - see MTP folder.			5 times a week
1 2	2-9-24 (2-9-24 & 3-9-24 - INSET) 9-9-24	Number: Place Value	• 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 • Step 7: Round any integer • Step 8: Negative numbers	• 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 all of the above.	NRICH Round the Four Dice https://nrich.maths.org/10426?utm_source=primary-map	
3 4 5	16-9-24 23-9-24 30-9-24	Number: Addition, Subtraction, Multiplication and Division	• 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	• Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. • Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. • Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as	NRICH Dicey Operations https://nrich.maths.org/6606 NRICH Dicey Operations https://nrich.maths.org/6606	Cover factors, multiples, squares, primes, squares and cubes in Maths Skills

			• 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	whole number remainders, fractions, or by rounding as appropriate for the context. • Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context. • Perform mental calculations, including with mixed operations and large numbers. • Identify common factors, common multiples and prime numbers. • 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.	Puzzles and Problems Y5 and Y6 – A Bit Fishy	Check Calculation Strategy Policy Language – addend and sum; minuend, subtrahend and difference; multiplier, multiplicand, factor and product; dividend, divisor and quotient (see Maths
6 7	7-10-24 14-10-24	Number: Fractions A	• 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) • Step 5: Add and subtract simple fractions • Step 6: Add and subtract any two fractions • Step 7: Add mixed numbers • Step 8: Subtract mixed numbers • Step 9: Multi-step problems	FRACTIONS • 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. • Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$). • Divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$).		Also cover 4 ops of fractions through Maths Skills See Notes for Fractions

8	21-10-24	Number: Fractions B Continued in Autumn 2	• 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	FRACTIONS • 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. • Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$). • Divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$).	Fractions https://nrich.maths.org/1102	Also cover 4 ops of fractions through Maths Skills See Notes for Fractions
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Maths Medium Term Plan

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Autumn 2

Week	Week Beginning	Unit	Small Steps	N.C. Links	Enriching our Mathematicians	Notes / AOI
1-7		Maths Skills	Arithmetic focus on numbers, multiples and factors etc.			2 times a week
1-7		NSM Times Tables Programme	Follow the updated TBPS programme - see MTP folder.			5 times a week
1	4-11-24	Number: Fractions B	Continued from Autumn 1			
2 3	11-11-24 18-11-24	Number: Decimals	• Step 1: Place value within 1 • Step 2: Place value - integers and decimals • Step 3: Round decimals • Step 4: Add and subtract decimals • Step 5: Multiply by 10, 100 and 1,000 • Step 6: Divide by 10, 100 and 1,000 • Step 7: Multiply decimals by integers • Step 8: Divide decimals by integers • Step 9: Multiply and divide decimals in context	• Associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$). • Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places. • Multiply one digit numbers with up to two decimal places by whole numbers. • Use written division methods in cases where the answer has up to two decimal places. • Solve problems which require answers to be rounded to specified degrees of accuracy. • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.		Multiply and divide by 10, 100 and 1000 - use Maths Skills See Notes for Fractions

4	25-11-24	Number: Fractions, Decimals and Percentage s	• Step 1: Decimal and fraction equivalents • Step 2: Fractions as division • Step 3: Understand percentages • Step 4: Fractions to percentages • Step 5: Equivalent fractions, decimals and percentages • Step 6: Order fractions, decimals and percentages • Step 7: Percentage of an amount - one step • Step 8: Percentage of an amount - multi-step • Step 9: Percentages - missing values	DECIMALS • Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. • Multiply one-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 which require answers to be rounded to specified degrees of accuracy. PERCENTAGES • Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison. • Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.	NRICH Would You Rather? https://nrich.maths.org/1118 (Mel has a version of this that might be better)	See Notes for Fractions
5	2-12-24					
6	9-12-24	Number: Ratio	• Step 1: Add or multiply? • Step 2: Use ratio language • Step 3: Introduction to the ratio symbol • Step 4: Ratio and fractions • Step 5: Scale drawing • Step 6: Use scale factors • Step 7: Similar shapes • Step 8: Ratio problems • Step 9: Proportion problems • Step 10: Recipes	• 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 similar shapes where the scale factor is known or can be found. • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.		See Notes for Fractions
7	16-12-24	Number: BODMAS	• Step 15: Order of operations	• Use their knowledge of the order of operations to carry out calculations involving the four operations.	NRICH Four Goodness Sake https://nrich.maths.org/1081	(Step from 4 operations)

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Spring 1

Week	Week Beginning	Unit	Small Steps	N.C. Links	Enriching our Mathematicians	Notes / AOI
1-6		Maths Skills	Arithmetic focus on numbers, multiples and factors etc.			3 times a week
1-6		NSM Times Tables Programme	Follow the updated TBPS programme - see MTP folder.			5 times a week
1	6-1-25	Measurement: Conversions and problem solving	• Step 1: Metric measures. • Step 2: Convert metric measures. • Step 3: Calculate with metric measures. • Step 4: Miles and kilometres. • Step 5: Imperial measures.	• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three 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 d.p. • Convert between miles and kilometres.		
2 3	13-1-25 20-1-25	Number: Addition, Subtraction, Multiplication and Division	Retrieval Word problems • Step 16: Mental calculations and estimation • Step 17: Reason from known facts	• Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. • Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. • Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as	NRICH Twenty Divided into Six https://nrich.maths.org/1047 NRICH Trebling https://nrich.maths.org/2004	Check Calculation Strategy Policy Language - addend and sum; minuend, subtrahend and difference;

				whole number remainders, fractions, or by rounding as appropriate for the context. • Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context. • Perform mental calculations, including with mixed operations and large numbers. • Identify common factors, common multiples and prime numbers. • Use their knowledge of the order of operations to carry out calculations involving the four operations. • 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.		multiplier, multiplicand, factor and product; dividend, divisor and quotient (see Maths See Notes for Fractions)
4	27-1-25	Measurement: Area, Perimeter and Volume	• Step 1: Shapes - same area • Step 2: Area and perimeter • Step 3: Area of a triangle - counting squares • Step 4: Area of a right-angled triangle • Step 5: Area of any triangle • Step 6: Area of a parallelogram • Step 7: Volume - counting cubes • Step 8: Volume of a cuboid	• 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 cm³, m³ and extending to other units (mm³, km³).	NRICH Fitted https://nrich.maths.org/1854	
5 6	3-2-25 (7-2-25 - INSET) 10-2-25 (10-2-25 - INSET)	Geometry: Properties of Shape	• Step 1: Measure and classify angles • Step 2: Calculate angles • Step 3: Vertically opposite angles • Identify, name and draw triangle on dotted paper (not in WRM) • Step 4: Angles in a triangle • Step 5: Angles in a triangle - special cases	• Draw 2-D shapes using given dimensions and angles. • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons.	NRICH Always, Sometimes, Never, Shape https://nrich.maths.org/12673	Additional steps here that are not in WRM but essential for

			• Step 6: Angles in a triangle - missing angles • Step 7: Angles in quadrilaterals • Identify and name 2D shapes (not in WRM) • Step 8: Angles in polygons • Step 9: Circles • Step 10: Draw shapes accurately • Identify and name 3D shapes (not in WRM) • Step 11: Nets of 3-D shapes	• Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.	NRICH Air Nets Air Nets (maths.org) NRICH Cut Nets https://nrich.maths.org/2315	our children to revise.
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Spring 2

Week	Week Beginning	Unit	Small Steps	N.C. Links	Enriching our Mathematicians	Notes / AOI
1-6		Maths Skills	Arithmetic focus on numbers, multiples and factors etc.			4 times a week (or 3 as a minimum)
1-6		NSM Times Tables Programme	Follow the updated TBPS programme - see MTP folder.			5 times a week
1	24-2-25	Year 6 Residential				
2	3-3-25	Number: Algebra	• Step 1: 1-step function machines • Step 2: 2-step function machines • Step 3: Form expressions • Step 4: Substitution • Step 5: Formulae • Step 6: Form equations • Step 7: Solve 1-step equations • Step 8: Solve 2-step equations • Step 9: Find pairs of values • Step 10: Solve problems with two unknowns	• Use simple formulae. • Generate and describe linear number sequences. • Express missing number problems algebraically. • Find pairs of numbers that satisfy an equation with two unknowns. • Enumerate possibilities of combinations of two variables.	Puzzles and Problems Y5 and Y6 - Shape Puzzle	
3	10-3-25					
3	10-3-25	Number: Fractions, Decimals and Percentages	Retrieval - conversion between FDP Retrieval - order FDP Retrieval - 4 operations of fractions		NRICH Bryony's Triangle https://nrich.maths.org/7392	See Notes for Fractions
4	17-3-25					

					Puzzles and Problems Y5 and Y6 - Slick Jim	
5	24-3-25	Statistics	• 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 • Step 6: The mean	• Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. • Interpret and construct pie charts and line graphs and use these to solve problems. • Calculate the mean as an average.		
6	31-3-25	Geometry: Position and Direction	• 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	• 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.		

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Summer 1

Week	Week Beginning	Unit	Small Steps	N.C. Links	Enriching our Mathematicians	Notes / AOI
1-5		Maths Skills	Arithmetic focus on numbers, multiples and factors etc.			5 times a week
1-5		NSM Times Tables Programme	Follow the updated TBPS programme - see MTP folder.			5 times a week
1	21-4-25 (4 days)	Consolidation / Revision			Rounding: decimals rounding_hexagon_jigsaw.pdf (primaryresources.co.uk)	
2	28-4-25					
3	5-5-25 (4 days)				Fractions https://nrich.maths.org/5467	
4	12-5-25 (SATs Week)	SATs Week				
5	19-5-25 (World Maths Day - date tbc; 23-5-25 - INSET)	Themed projects, consolidation, investigations, problem solving and preparation for KS3			NRICH Making Spirals https://nrich.maths.org/8294 (or similar)	

				NRICH Baraville https://nrich.maths.org/6522	
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Summer 2

Week	Week Beginning	Unit	Small Steps	N.C. Links	Enriching our Mathematicians	Notes / AOI
1-8		NSM Times Tables Programme	Follow the updated TBPS programme - see MTP folder.			5 times a week
1	2-6-25	Themed projects, consolidation, investigations, problem solving and preparation for KS3				
2	9-6-25					
3	16-6-25					
4	23-6-25					
5	30-6-25					
6	7-7-25					
7	14-7-25					
8	21-7-25 (2 days)					