ST PHILOMENA'S PRIMARY SCHOOL
MATHS MEDIUM TERM PLANNING YEAR 6
2026 - 2027

AUTUMN 1

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 1	Step 1	Numbers to 1,000,000	I can read, represent and understand numbers to the given value.	Know that the position of a digit determines its value and adjacent places are related by powers of 10.
	Step 2	Numbers to 10,000,000	I can read, represent and understand numbers to the given value.	Know that the position of a digit determines its value and adjacent places are related by powers of 10.
	Step 3	Read and write numbers to 10,000,000	I can read and write numbers accurately in digits and words.	Know that the position of a digit determines its value and adjacent places are related by powers of 10.
	Step 4	Powers of 10	I can use powers of 10 to understand place value relationships.	Know that the position of a digit determines its value and adjacent places are related by powers of 10.
	Arithmetic	Place value and powers of 10	I can calculate mentally using place value.	Know how powers of 10 change digit values.
NC LINKS	Read, write, order and compare numbers up to 10,000,000; round integers; use negative numbers in context. Perform mental calculations and use knowledge of the order of operations. Identify common factors, common multiples and prime numbers.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 2	Step 5	Number line to 10,000,000	I can locate and estimate integers on a number line.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Step 6	Compare and order any integers	I can compare and order numbers accurately.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Step 7	Round any integer	I can round numbers to an appropriate degree of accuracy.	Know how the digit to the right of the rounding place determines whether to round up or down.
	Step 8	Negative numbers	I can use negative numbers in context and calculate intervals across zero.	Know that negative numbers are less than zero and intervals can cross zero.
	Arithmetic	Addition and subtraction	I can calculate efficiently with integers.	Know efficient mental and written strategies for addition and subtraction.
NC LINKS	Read, write, order and compare numbers up to 10,000,000; round integers; use negative numbers in context. Perform mental calculations and use knowledge of the order of operations. Identify common factors, common multiples and prime numbers.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 3	Step 1	Add and subtract integers	I can add and subtract accurately and solve related problems.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Step 2	Common factors	I can identify and use factors to solve problems.	Know that a factor divides a number exactly and factor pairs multiply to make the number.
	Step 3	Common multiples	I can identify and use multiples to solve problems.	Know that multiples are products of a number and whole numbers.
	Step 4	Rules of divisibility	I can use divisibility rules to identify factors efficiently.	Know and apply common divisibility rules to test numbers efficiently.
	Arithmetic	Multiplication facts	I can recall and apply multiplication facts fluently.	Know multiplication and related division facts fluently.
NC LINKS	Read, write, order and compare numbers up to 10,000,000; round integers; use negative numbers in context. Perform mental calculations and use knowledge of the order of operations. Identify common factors, common multiples and prime numbers.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 4	Step 5	Primes to 100	I can identify prime numbers and explain how I know.	Know that a prime number has exactly two factors: 1 and itself.
	Step 6	Square and cube numbers	I can calculate and recognise square and cube numbers.	Know that square numbers are n × n and cube numbers are n × n × n.
	Step 7	Multiply up to a 4-digit number by a 2-digit number	I can multiply accurately and apply the method in problems.	Know how place value and the distributive structure support formal multiplication.
	Step 8	Solve problems with multiplication	I can apply this mathematical idea accurately and explain my reasoning.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Arithmetic	Division facts	I can use multiplication facts to divide efficiently.	Know that division is the inverse of multiplication.
NC LINKS	Read, write, order and compare numbers up to 10,000,000; round integers; use negative numbers in context. Perform mental calculations and use knowledge of the order of operations. Identify common factors, common multiples and prime numbers.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 5	Step 9	Short division	I can divide accurately and interpret remainders in context.	Know that division is the inverse of multiplication and remainders must be interpreted in context.
	Step 10	Division using factors	I can identify and use factors to solve problems.	Know that a factor divides a number exactly and factor pairs multiply to make the number.
	Step 11	Introduction to long division	I can divide accurately and interpret remainders in context.	Know that division is the inverse of multiplication and remainders must be interpreted in context.
	Step 12	Long division with remainders	I can divide accurately and interpret remainders in context.	Know that division is the inverse of multiplication and remainders must be interpreted in context.
	Arithmetic	Factors and multiples	I can identify factors and multiples quickly.	Know common factors, common multiples and divisibility facts.
NC LINKS	Read, write, order and compare numbers up to 10,000,000; round integers; use negative numbers in context. Perform mental calculations and use knowledge of the order of operations. Identify common factors, common multiples and prime numbers.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 6	Step 13	Solve problems with division	I can divide accurately and interpret remainders in context.	Know that division is the inverse of multiplication and remainders must be interpreted in context.
	Step 14	Solve multi-step problems	I can apply this mathematical idea accurately and explain my reasoning.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Step 15	Order of operations	I can use the correct order of operations in calculations.	Know that brackets, multiplication/division and addition/subtraction are completed in the correct order.
	Step 16	Mental calculations and estimation	I can choose efficient mental methods and estimate to check answers.	Know how rounding and known facts can be used to estimate and check calculations.
	Arithmetic	Fractions	I can calculate with fractions fluently.	Know key fraction equivalences and efficient calculation strategies.
NC LINKS	Read, write, order and compare numbers up to 10,000,000; round integers; use negative numbers in context. Perform mental calculations and use knowledge of the order of operations. Identify common factors, common multiples and prime numbers.			

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AUTUMN 2

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 7	Step 17	Reason from known facts	I can use known facts to derive new facts efficiently.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Step 1	Equivalent fractions and simplifying	I can identify equivalent fractions and simplify fractions.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 2	Equivalent fractions on a number line	I can locate and estimate integers on a number line.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 3	Compare and order (denominator)	I can compare and order numbers accurately.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Arithmetic	Decimals	I can calculate with decimals fluently.	Know how decimal place value supports mental calculation.
NC LINKS	Multiply multi-digit numbers using formal written methods; divide numbers up to 4 digits by 2-digit numbers; solve multi-step problems. Use common factors to simplify fractions; compare, order, add, subtract, multiply and divide fractions. Convert between standard units of measure.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 8	Step 4	Compare and order (numerator)	I can compare and order numbers accurately.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Step 5	Add and subtract simple fractions	I can add and subtract accurately and solve related problems.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 6	Add and subtract any two fractions	I can add and subtract accurately and solve related problems.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 7	Add mixed numbers	I can calculate accurately with mixed numbers.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Arithmetic	Percentages	I can find common percentages mentally.	Know useful fraction-decimal-percentage equivalents.
NC LINKS	Multiply multi-digit numbers using formal written methods; divide numbers up to 4 digits by 2-digit numbers; solve multi-step problems. Use common factors to simplify fractions; compare, order, add, subtract, multiply and divide fractions. Convert between standard units of measure.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 9	Step 8	Subtract mixed numbers	I can calculate accurately with mixed numbers.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Step 9	Multi-step problems	I can apply this mathematical idea accurately and explain my reasoning.	Know the key facts, vocabulary and representations needed to explain and apply this learning.
	Step 1	Multiply fractions by integers	I can multiply accurately and apply the method in problems.	Know how place value and the distributive structure support formal multiplication.
	Step 2	Multiply fractions by fractions	I can multiply accurately and apply the method in problems.	Know how place value and the distributive structure support formal multiplication.
	Arithmetic	Four operations	I can choose efficient operations and methods.	Know how inverse operations can be used to check answers.
NC LINKS	Multiply multi-digit numbers using formal written methods; divide numbers up to 4 digits by 2-digit numbers; solve multi-step problems. Use common factors to simplify fractions; compare, order, add, subtract, multiply and divide fractions. Convert between standard units of measure.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 10	Step 3	Divide a fraction by an integer	I can divide accurately and interpret remainders in context.	Know that division is the inverse of multiplication and remainders must be interpreted in context.
	Step 4	Divide any fraction by an integer	I can divide accurately and interpret remainders in context.	Know that division is the inverse of multiplication and remainders must be interpreted in context.
	Step 5	Mixed questions with fractions	I can apply this mathematical idea accurately and explain my reasoning.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 6	Fraction of an amount	I can find fractions of amounts and use inverse reasoning.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Arithmetic	Order of operations	I can evaluate calculations in the correct order.	Know the agreed order of operations.
NC LINKS	Multiply multi-digit numbers using formal written methods; divide numbers up to 4 digits by 2-digit numbers; solve multi-step problems. Use common factors to simplify fractions; compare, order, add, subtract, multiply and divide fractions. Convert between standard units of measure.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 11	Step 7	Fraction of an amount – find the whole	I can find fractions of amounts and use inverse reasoning.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 1	Metric measures	I can convert and calculate with measures accurately.	Know the relationships between common metric units and how to scale by powers of 10.
	Step 2	Convert metric measures	I can convert and calculate with measures accurately.	Know the relationships between common metric units and how to scale by powers of 10.
	Step 3	Calculate with metric measures	I can convert and calculate with measures accurately.	Know the relationships between common metric units and how to scale by powers of 10.
	Arithmetic	Mixed arithmetic	I can solve mixed arithmetic questions accurately.	Know how to select efficient strategies across the four operations.
NC LINKS	Multiply multi-digit numbers using formal written methods; divide numbers up to 4 digits by 2-digit numbers; solve multi-step problems. Use common factors to simplify fractions; compare, order, add, subtract, multiply and divide fractions. Convert between standard units of measure.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 12	Step 4	Miles and kilometres	I can convert and calculate with measures accurately.	Know commonly used imperial measures and useful approximate metric equivalents.
	Step 5	Imperial measures	I can convert and calculate with measures accurately.	Know commonly used imperial measures and useful approximate metric equivalents.
	Step 17	Reason from known facts – reasoning	I can apply this step to solve problems and explain my reasoning.	Know the key facts, vocabulary and representations needed to explain and apply this learning. I can justify the method or representation I choose.
	Step 5	Imperial measures – reasoning	I can apply this step to solve problems and explain my reasoning.	Know commonly used imperial measures and useful approximate metric equivalents. I can justify the method or representation I choose.
	Arithmetic	Arithmetic review	I can apply arithmetic skills accurately and at speed.	Know and recall key Year 6 arithmetic facts and procedures.
NC LINKS	Multiply multi-digit numbers using formal written methods; divide numbers up to 4 digits by 2-digit numbers; solve multi-step problems. Use common factors to simplify fractions; compare, order, add, subtract, multiply and divide fractions. Convert between standard units of measure.			

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SPRING 1

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 1	Step 1	Add or multiply?	I can multiply accurately and apply the method in problems.	Know how place value and the distributive structure support formal multiplication.
	Step 2	Use ratio language	I can use ratio to describe and solve multiplicative relationships.	Know that ratio describes a multiplicative relationship between quantities.
	Step 3	Introduction to the ratio symbol	I can use ratio to describe and solve multiplicative relationships.	Know that ratio describes a multiplicative relationship between quantities.
	Step 4	Ratio and fractions	I can use ratio to describe and solve multiplicative relationships.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Arithmetic	Place value and powers of 10	I can calculate mentally using place value.	Know how powers of 10 change digit values.
NC LINKS	Solve problems involving relative sizes of two quantities, unequal sharing and grouping using ratio and proportion. Use simple formulae; generate and describe linear number sequences; express missing-number problems algebraically and find pairs of numbers that satisfy equations.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 2	Step 5	Scale drawing	I can use scale factors to solve problems.	Know that corresponding lengths in similar shapes change by the same scale factor.
	Step 6	Use scale factors	I can identify and use factors to solve problems.	Know that a factor divides a number exactly and factor pairs multiply to make the number.
	Step 7	Similar shapes	I can use scale factors to solve problems.	Know that corresponding lengths in similar shapes change by the same scale factor.
	Step 8	Ratio problems	I can use ratio to describe and solve multiplicative relationships.	Know that ratio describes a multiplicative relationship between quantities.
	Arithmetic	Addition and subtraction	I can calculate efficiently with integers.	Know efficient mental and written strategies for addition and subtraction.
NC LINKS	Solve problems involving relative sizes of two quantities, unequal sharing and grouping using ratio and proportion. Use simple formulae; generate and describe linear number sequences; express missing-number problems algebraically and find pairs of numbers that satisfy equations.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 3	Steps 9 & 10	Proportion problems / Recipes	I can connect these related steps and solve problems using them.	Know that proportional quantities increase or decrease by the same multiplicative factor. Know that proportional quantities increase or decrease by the same multiplicative factor.
	Step 1	1-step function machines	I can use function machines to represent rules.	Know that a function applies the same operation or sequence of operations to each input.
	Step 2	2-step function machines	I can use function machines to represent rules.	Know that a function applies the same operation or sequence of operations to each input.
	Step 3	Form expressions	I can form algebraic expressions from mathematical situations.	Know that letters can represent numbers and that equality must be maintained when solving equations.
	Arithmetic	Multiplication facts	I can recall and apply multiplication facts fluently.	Know multiplication and related division facts fluently.
NC LINKS	Solve problems involving relative sizes of two quantities, unequal sharing and grouping using ratio and proportion. Use simple formulae; generate and describe linear number sequences; express missing-number problems algebraically and find pairs of numbers that satisfy equations.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 4	Step 4	Substitution	I can substitute values into expressions and formulae.	Know that letters can represent numbers and that equality must be maintained when solving equations.
	Step 5	Formulae	I can use and interpret simple formulae.	Know that letters can represent numbers and that equality must be maintained when solving equations.
	Step 6	Form equations	I can form and solve equations.	Know that letters can represent numbers and that equality must be maintained when solving equations.
	Step 7	Solve 1-step equations	I can form and solve equations.	Know that letters can represent numbers and that equality must be maintained when solving equations.
	Arithmetic	Division facts	I can use multiplication facts to divide efficiently.	Know that division is the inverse of multiplication.
NC LINKS	Solve problems involving relative sizes of two quantities, unequal sharing and grouping using ratio and proportion. Use simple formulae; generate and describe linear number sequences; express missing-number problems algebraically and find pairs of numbers that satisfy equations.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 5	Step 8	Solve 2-step equations	I can form and solve equations.	Know that letters can represent numbers and that equality must be maintained when solving equations.
	Steps 9 & 10	Find pairs of values / Solve problems with two unknowns	I can connect these related steps and solve problems using them.	Know that letters can represent numbers and that equality must be maintained when solving equations. Know that letters can represent numbers and that equality must be maintained when solving equations.
	Step 1	Place value within 1	I can apply this mathematical idea accurately and explain my reasoning.	Know that the position of a digit determines its value and adjacent places are related by powers of 10.
	Step 2	Place value – integers and decimals	I can calculate with decimals accurately and apply place value knowledge.	Know that the position of a digit determines its value and adjacent places are related by powers of 10.
	Arithmetic	Factors and multiples	I can identify factors and multiples quickly.	Know common factors, common multiples and divisibility facts.
NC LINKS	Solve problems involving relative sizes of two quantities, unequal sharing and grouping using ratio and proportion. Use simple formulae; generate and describe linear number sequences; express missing-number problems algebraically and find pairs of numbers that satisfy equations.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 6	Step 3	Round decimals	I can round numbers to an appropriate degree of accuracy.	Know how the digit to the right of the rounding place determines whether to round up or down.
	Step 4	Add and subtract decimals	I can add and subtract accurately and solve related problems.	Know the place value of decimal digits and how operations affect their value.
	Step 5	Multiply by 10, 100 and 1,000	I can multiply accurately and apply the method in problems.	Know how place value and the distributive structure support formal multiplication.
	Step 6	Divide by 10, 100 and 1,000	I can divide accurately and interpret remainders in context.	Know that division is the inverse of multiplication and remainders must be interpreted in context.
	Arithmetic	Fractions	I can calculate with fractions fluently.	Know key fraction equivalences and efficient calculation strategies.
NC LINKS	Solve problems involving relative sizes of two quantities, unequal sharing and grouping using ratio and proportion. Use simple formulae; generate and describe linear number sequences; express missing-number problems algebraically and find pairs of numbers that satisfy equations.			

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SPRING 2

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 7	Step 7	Multiply decimals by integers	I can multiply accurately and apply the method in problems.	Know how place value and the distributive structure support formal multiplication.
	Steps 8 & 9	Divide decimals by integers / Multiply and divide decimals in context	I can connect these related steps and solve problems using them.	Know that division is the inverse of multiplication and remainders must be interpreted in context. Know how place value and the distributive structure support formal multiplication.
	Step 1	Decimal and fraction equivalents	I can identify equivalent fractions and simplify fractions.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 2	Fractions as division	I can divide accurately and interpret remainders in context.	Know that division is the inverse of multiplication and remainders must be interpreted in context.
	Arithmetic	Decimals	I can calculate with decimals fluently.	Know how decimal place value supports mental calculation.
NC LINKS	Identify the value of each digit in numbers to three decimal places and multiply/divide by 10, 100 and 1,000. Use equivalences between fractions, decimals and percentages. Calculate area of triangles and parallelograms and calculate/estimate volume. Interpret and construct pie charts and line graphs and calculate the mean.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 8	Step 3	Understand percentages	I can use percentages and connect them to fractions and decimals.	Know that percent means "out of 100" and can be expressed as an equivalent fraction or decimal.
	Step 4	Fractions to percentages	I can use percentages and connect them to fractions and decimals.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 5	Equivalent fractions, decimals and percentages	I can identify equivalent fractions and simplify fractions.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Step 6	Order fractions, decimals and percentages	I can calculate with decimals accurately and apply place value knowledge.	Know that equivalent fractions represent the same value and common denominators support comparison and calculation.
	Arithmetic	Percentages	I can find common percentages mentally.	Know useful fraction-decimal-percentage equivalents.
NC LINKS	Identify the value of each digit in numbers to three decimal places and multiply/divide by 10, 100 and 1,000. Use equivalences between fractions, decimals and percentages. Calculate area of triangles and parallelograms and calculate/estimate volume. Interpret and construct pie charts and line graphs and calculate the mean.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 9	Step 7	Percentage of an amount – one step	I can use percentages and connect them to fractions and decimals.	Know that percent means "out of 100" and can be expressed as an equivalent fraction or decimal.
	Steps 8 & 9	Percentage of an amount – multi-step / Percentages – missing values	I can connect these related steps and solve problems using them.	Know that percent means "out of 100" and can be expressed as an equivalent fraction or decimal. Know that percent means "out of 100" and can be expressed as an equivalent fraction or decimal.
	Step 1	Shapes – same area	I can calculate and reason about area accurately.	Know that area measures surface covered and can be calculated using appropriate formulae.
	Step 2	Area and perimeter	I can calculate and reason about area accurately.	Know that area measures surface covered and can be calculated using appropriate formulae.
	Arithmetic	Four operations	I can choose efficient operations and methods.	Know how inverse operations can be used to check answers.
NC LINKS	Identify the value of each digit in numbers to three decimal places and multiply/divide by 10, 100 and 1,000. Use equivalences between fractions, decimals and percentages. Calculate area of triangles and parallelograms and calculate/estimate volume. Interpret and construct pie charts and line graphs and calculate the mean.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 10	Step 3	Area of a triangle – counting squares	I can calculate and reason about area accurately.	Know that area measures surface covered and can be calculated using appropriate formulae.
	Step 4	Area of a right-angled triangle	I can calculate and reason about area accurately.	Know that area measures surface covered and can be calculated using appropriate formulae.
	Step 5	Area of any triangle	I can calculate and reason about area accurately.	Know that area measures surface covered and can be calculated using appropriate formulae.
	Step 6	Area of a parallelogram	I can calculate and reason about area accurately.	Know that area measures surface covered and can be calculated using appropriate formulae.
	Arithmetic	Order of operations	I can evaluate calculations in the correct order.	Know the agreed order of operations.
NC LINKS	Identify the value of each digit in numbers to three decimal places and multiply/divide by 10, 100 and 1,000. Use equivalences between fractions, decimals and percentages. Calculate area of triangles and parallelograms and calculate/estimate volume. Interpret and construct pie charts and line graphs and calculate the mean.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 11	Step 7	Volume – counting cubes	I can calculate and reason about volume.	Know that volume measures 3-D space and is expressed in cubic units.
	Step 8	Volume of a cuboid	I can calculate and reason about volume.	Know that volume measures 3-D space and is expressed in cubic units.
	Step 1	Line graphs	I can read, interpret and solve problems using line graphs.	Know that scales, labels and proportions must be read carefully to interpret data accurately.
	Step 2	Dual bar charts	I can read, interpret and compare data in bar charts.	Know that scales, labels and proportions must be read carefully to interpret data accurately.
	Arithmetic	Mixed arithmetic	I can solve mixed arithmetic questions accurately.	Know how to select efficient strategies across the four operations.
NC LINKS	Identify the value of each digit in numbers to three decimal places and multiply/divide by 10, 100 and 1,000. Use equivalences between fractions, decimals and percentages. Calculate area of triangles and parallelograms and calculate/estimate volume. Interpret and construct pie charts and line graphs and calculate the mean.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 12	Step 3	Read and interpret pie charts	I can read, interpret and construct pie charts.	Know that scales, labels and proportions must be read carefully to interpret data accurately.
	Step 4	Pie charts with percentages	I can use percentages and connect them to fractions and decimals.	Know that percent means "out of 100" and can be expressed as an equivalent fraction or decimal.
	Step 5	Draw pie charts	I can read, interpret and construct pie charts.	Know that scales, labels and proportions must be read carefully to interpret data accurately.
	Step 6	The mean	I can calculate and interpret the mean as an average.	Know that the mean is the total of the values divided by the number of values.
	Arithmetic	Arithmetic review	I can apply arithmetic skills accurately and at speed.	Know and recall key Year 6 arithmetic facts and procedures.
NC LINKS	Identify the value of each digit in numbers to three decimal places and multiply/divide by 10, 100 and 1,000. Use equivalences between fractions, decimals and percentages. Calculate area of triangles and parallelograms and calculate/estimate volume. Interpret and construct pie charts and line graphs and calculate the mean.			

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SUMMER 1

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 1	Step 1	Measure and classify angles	I can measure, calculate and reason about angles.	Know key angle facts for lines, triangles, quadrilaterals and polygons.
	Step 2	Calculate angles	I can measure, calculate and reason about angles.	Know key angle facts for lines, triangles, quadrilaterals and polygons.
	Step 3	Vertically opposite angles	I can measure, calculate and reason about angles.	Know key angle facts for lines, triangles, quadrilaterals and polygons.
	Step 4	Angles in a triangle	I can measure, calculate and reason about angles.	Know key angle facts for lines, triangles, quadrilaterals and polygons.
	Arithmetic	Place value and powers of 10	I can calculate mentally using place value.	Know how powers of 10 change digit values.
NC LINKS	Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes; find unknown angles in triangles, quadrilaterals and regular polygons; recognise vertically opposite angles; illustrate and name parts of circles.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 2	Step 5	Angles in a triangle – special cases	I can measure, calculate and reason about angles.	Know key angle facts for lines, triangles, quadrilaterals and polygons.
	Step 6	Angles in a triangle – missing angles	I can measure, calculate and reason about angles.	Know key angle facts for lines, triangles, quadrilaterals and polygons.
	Step 7	Angles in a quadrilateral	I can measure, calculate and reason about angles.	Know key angle facts for lines, triangles, quadrilaterals and polygons.
	Step 8	Angles in polygons	I can measure, calculate and reason about angles.	Know key angle facts for lines, triangles, quadrilaterals and polygons.
	Arithmetic	Addition and subtraction	I can calculate efficiently with integers.	Know efficient mental and written strategies for addition and subtraction.
NC LINKS	Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes; find unknown angles in triangles, quadrilaterals and regular polygons; recognise vertically opposite angles; illustrate and name parts of circles.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 3	Step 9	Circles	I can identify and use the parts and properties of circles.	Know that diameter is twice the radius and identify radius, diameter and circumference.
	Step 10	Draw shapes accurately	I can draw 2-D shapes accurately using given dimensions and angles.	Know how dimensions, angles and properties determine accurate 2-D and 3-D representations.
	Step 11	Nets of 3-D shapes	I can recognise and construct nets of 3-D shapes.	Know how dimensions, angles and properties determine accurate 2-D and 3-D representations.
	Step 1	The first quadrant	I can read, plot and reason with coordinates in four quadrants.	Know that coordinates are written (x, y) and signs determine position in the four quadrants.
	Arithmetic	Multiplication facts	I can recall and apply multiplication facts fluently.	Know multiplication and related division facts fluently.
NC LINKS	Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes; find unknown angles in triangles, quadrilaterals and regular polygons; recognise vertically opposite angles; illustrate and name parts of circles.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 4	Step 2	Read and plot points in four quadrants	I can read, plot and reason with coordinates in four quadrants.	Know that coordinates are written (x, y) and signs determine position in the four quadrants.
	Step 3	Solve problems with coordinates	I can read, plot and reason with coordinates in four quadrants.	Know that coordinates are written (x, y) and signs determine position in the four quadrants.
	Step 4	Translations	I can translate shapes on a coordinate grid.	Know that a translation moves every point the same distance in the same direction.
	Step 5	Reflections	I can reflect shapes accurately on a coordinate grid.	Know that corresponding points are the same perpendicular distance from the mirror line.
	Arithmetic	Division facts	I can use multiplication facts to divide efficiently.	Know that division is the inverse of multiplication.
NC LINKS	Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes; find unknown angles in triangles, quadrilaterals and regular polygons; recognise vertically opposite angles; illustrate and name parts of circles.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 5	Step 1	Measure and classify angles – reasoning	I can apply this step to solve problems and explain my reasoning.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 2	Calculate angles – reasoning	I can apply this step to solve problems and explain my reasoning.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 3	Vertically opposite angles – reasoning	I can apply this step to solve problems and explain my reasoning.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 4	Angles in a triangle – reasoning	I can apply this step to solve problems and explain my reasoning.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Arithmetic	Factors and multiples	I can identify factors and multiples quickly.	Know common factors, common multiples and divisibility facts.
NC LINKS	Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes; find unknown angles in triangles, quadrilaterals and regular polygons; recognise vertically opposite angles; illustrate and name parts of circles.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 6	Step 5	Angles in a triangle – special cases – reasoning	I can apply this step to solve problems and explain my reasoning.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 6	Angles in a triangle – missing angles – reasoning	I can apply this step to solve problems and explain my reasoning.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 7	Angles in a quadrilateral – reasoning	I can apply this step to solve problems and explain my reasoning.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 8	Angles in polygons – reasoning	I can apply this step to solve problems and explain my reasoning.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Arithmetic	Fractions	I can calculate with fractions fluently.	Know key fraction equivalences and efficient calculation strategies.
NC LINKS	Recognise, describe and build simple 3-D shapes, including making nets. Compare and classify geometric shapes; find unknown angles in triangles, quadrilaterals and regular polygons; recognise vertically opposite angles; illustrate and name parts of circles.			

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SUMMER 2

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 7	Step 9	Circles – reasoning	I can apply this step to solve problems and explain my reasoning.	Know that diameter is twice the radius and identify radius, diameter and circumference. I can justify the method or representation I choose.
	Step 10	Draw shapes accurately – reasoning	I can apply this step to solve problems and explain my reasoning.	Know how dimensions, angles and properties determine accurate 2-D and 3-D representations. I can justify the method or representation I choose.
	Step 11	Nets of 3-D shapes – reasoning	I can apply this step to solve problems and explain my reasoning.	Know how dimensions, angles and properties determine accurate 2-D and 3-D representations. I can justify the method or representation I choose.
	Step 1	The first quadrant – reasoning	I can apply this step to solve problems and explain my reasoning.	Know that coordinates are written (x, y) and signs determine position in the four quadrants. I can justify the method or representation I choose.
	Arithmetic	Decimals	I can calculate with decimals fluently.	Know how decimal place value supports mental calculation.
NC LINKS	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. Apply Year 6 geometry knowledge to reasoning and problem solving.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 8	Financial Education 1	Currencies and Spending Options	I understand countries have their own currencies and can explain different ways to pay for things.	Know that countries have their own currencies and that people can pay in different ways, including cash, cards and digital payments.
	Financial Education 2	Spending Influences	I can talk about factors that may influence how people spend their money.	Know that needs, wants, advertising, friends, family and emotions can influence spending choices.
	Financial Education 3	Budgeting	I can explain why budgeting can be helpful and how a budget can be made.	Know that a budget compares money available with planned spending and can help people make informed choices.
	Financial Education 4	Money and Emotional Wellbeing	I can discuss the effect money can have on people's emotional wellbeing.	Know that money worries and financial choices can affect feelings and wellbeing, and that support can be sought.
	Financial Education 5	Online Financial Safety	I can explain different ways of spending money online and how to do this securely.	Know how to check that online payments are secure and why personal and financial information must be protected.
	Financial Education 6	Employment Choices	I can discuss factors which may influence people's employment decisions and ways people can contribute positively to society.	Know that pay, interests, skills, working conditions and contribution to society can influence employment choices.
	Arithmetic	Percentages	I can find common percentages mentally.	Know useful fraction-decimal-percentage equivalents.
NC LINKS	Financial Education enrichment: currencies and payment options; spending influences; budgeting; money and emotional wellbeing; online financial safety; and employment choices.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 9	Step 2	Read and plot points in four quadrants – reasoning	I can apply this step to solve problems and explain my reasoning.	Know that coordinates are written (x, y) and signs determine position in the four quadrants. I can justify the method or representation I choose.
	Step 3	Solve problems with coordinates – reasoning	I can apply this step to solve problems and explain my reasoning.	Know that coordinates are written (x, y) and signs determine position in the four quadrants. I can justify the method or representation I choose.
	Step 4	Translations – reasoning	I can apply this step to solve problems and explain my reasoning.	Know that a translation moves every point the same distance in the same direction. I can justify the method or representation I choose.
	Step 5	Reflections – reasoning	I can apply this step to solve problems and explain my reasoning.	Know that corresponding points are the same perpendicular distance from the mirror line. I can justify the method or representation I choose.
	Arithmetic	Four operations	I can choose efficient operations and methods.	Know how inverse operations can be used to check answers.
NC LINKS	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. Apply Year 6 geometry knowledge to reasoning and problem solving.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 10	Step 1	Measure and classify angles – application	I can apply this step accurately in a different context.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 2	Calculate angles – application	I can apply this step accurately in a different context.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 3	Vertically opposite angles – application	I can apply this step accurately in a different context.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 4	Angles in a triangle – application	I can apply this step accurately in a different context.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Arithmetic	Order of operations	I can evaluate calculations in the correct order.	Know the agreed order of operations.
NC LINKS	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. Apply Year 6 geometry knowledge to reasoning and problem solving.			

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	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 11	Step 5	Angles in a triangle – special cases – application	I can apply this step accurately in a different context.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 6	Angles in a triangle – missing angles – application	I can apply this step accurately in a different context.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 7	Angles in a quadrilateral – application	I can apply this step accurately in a different context.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Step 8	Angles in polygons – application	I can apply this step accurately in a different context.	Know key angle facts for lines, triangles, quadrilaterals and polygons. I can justify the method or representation I choose.
	Arithmetic	Mixed arithmetic	I can solve mixed arithmetic questions accurately.	Know how to select efficient strategies across the four operations.
NC LINKS	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. Apply Year 6 geometry knowledge to reasoning and problem solving.			

	WHITE ROSE STEPS	WHITE ROSE CONTENT	LEARNING OBJECTIVES	KEY KNOWLEDGE
WEEK 12	Step 9	Circles – application	I can apply this step accurately in a different context.	Know that diameter is twice the radius and identify radius, diameter and circumference. I can justify the method or representation I choose.
	Step 10	Draw shapes accurately – application	I can apply this step accurately in a different context.	Know how dimensions, angles and properties determine accurate 2-D and 3-D representations. I can justify the method or representation I choose.
	Step 11	Nets of 3-D shapes – application	I can apply this step accurately in a different context.	Know how dimensions, angles and properties determine accurate 2-D and 3-D representations. I can justify the method or representation I choose.
	Step 1	The first quadrant – application	I can apply this step accurately in a different context.	Know that coordinates are written (x, y) and signs determine position in the four quadrants. I can justify the method or representation I choose.
	Arithmetic	Arithmetic review	I can apply arithmetic skills accurately and at speed.	Know and recall key Year 6 arithmetic facts and procedures.
NC LINKS	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. Apply Year 6 geometry knowledge to reasoning and problem solving.			