



Year 7 Curriculum Grid

Mathematics



Year/Term	Unit	Intent			
		Foundation	Foundation Plus	Higher	Higher Plus
Overall		Foundation	Foundation Plus	Higher	Higher Plus
Autumn 1	Number	Identify factor, multiples, common factors and common multiples.	Identify factor, multiples, common factors and common multiples.	Know square numbers, roots and prime numbers. Estimate roots. Simplify surds. Convert between ordinary numbers and standard form.	Know square numbers, roots and prime numbers. Prime decomposition. Calculate with positive integer indices. Estimate roots. Simplify surds. Convert between ordinary numbers and standard form.
	Sequences	Sequences of odd/even numbers. Continue simple linear sequences. Identify term-to-term rule.	Continue linear sequences. Identify and use term-to-term rule. Recognise patterns generate numerical sequences.	Linear sequences, simple geometric sequences, special sequences (triangular, square, cube, Fibonacci)	Linear sequences, simple geometric sequences, special sequences (triangular, square, cube, Fibonacci)
	Algebra Skills	Algebraic notation introduced. Understand vocabulary of algebra. Simplify one variable expressions.	Algebraic notation used. Understand and use vocabulary of algebra. Simplify one variable expressions.	Form expressions from context. Simplify expressions. Expand single brackets. Write expressions using powers.	Form expressions from context. Simplify expressions. Expand single brackets. Write expressions using powers.
	Ratio & Proportion	Simple proportion problems using unitary method. Ratio introduced and ratio notation used.	Simple proportion problems. Understand and use ratio notation.	Direct proportion in real contexts. Simplify ratios. Relate ratios to fractions.	Direct proportion in real contexts. Simplify ratios. Relate ratios to fractions. Share a quantity in a ratio.
Autumn 2	Measures & Estimation	Simple money calculations. Time conversion problems. . Choose appropriate units for estimating or measuring. Round to nearest integer. Round to powers of 10.	Money calculations. Time conversion problems. Choose appropriate units for estimating or measuring. Convert between units of measure.	Convert between units of measure. Solve simple arithmetic problems involving units of measure. Round to significant figures. Estimate simple calculations.	Convert between units of measure. Solve arithmetic problems involving units of measure. Round to significant figures. Estimate calculations.



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		Draw and measure line segments accurately. Measure and find perimeter of simple shapes.	Round to decimal places. Measure shapes to find their perimeter.	Speed, distance, time calculations. Perimeter of compound shapes.	Speed, distance, time calculations. Perimeter of compound shapes.
	Functions & Equations	Simple calculations using function machines. Equations introduced. Solve simple one-step equations.	Calculations using function machines. Solve one-step linear equations.	Solve one and two-step linear equations.	Solve two-step linear equations.
	Translations & Vectors	Translate a point then a simple shape using left, right, up, down instructions. Describe a simple translation.	Translate a shape using worded instructions. Describe a translation in words.		
	Angles	Name polygons. Properties relating to polygons and notation. Types of angles. Draw and measure angles. Identify parallel and perpendicular lines.	Properties relating to polygons and notation. Draw and measure angles. Identify parallel and perpendicular lines. Angles on a straight line and at a point. Vertically opposite angles.	Angle sums of polygons. Angles on a straight line and at a point. Vertically opposite angles.	Angle sums of polygons. Angles on a straight line and at a point. Vertically opposite angles. Angles in a triangle.
Spring 1	Graphs & Tables	Coordinates in the first quadrant. Simple mileage charts. Simple timetables.	Coordinates in all four quadrants. Mileage charts. Timetables.	Find missing coordinates and midpoints. Plot simple linear graphs using coordinates.	Find missing coordinates and midpoints. Plot linear graphs using coordinates.
	Statistics	Two-way tables for non-numerical information. Data collection sheets and tally charts. Pictograms. Bar and vertical line charts.	Two-way tables for non-numerical information. Data collection sheets and tally charts. Bar and vertical line charts. Dual bar charts.	Two-way tables for numerical information. Averages and range from list of data and charts. Dual bar charts. Pie charts.	Two-way tables for numerical information. Averages and range from list of data and charts. Dual bar charts. Pie charts.
	Decimals	Understand place value, including decimal place value. Simple familiar terminating decimals as fractions.	Understand place value, including decimal place value. Terminating decimals as fractions.	Convert between familiar decimals and fractions. Order decimals. Add and subtract decimals. Multiply and divide decimals by whole numbers.	Convert between decimals and fractions. Order decimals. Add and subtract decimals. Multiply and divide decimals by whole numbers.



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Spring 2	Fractions	Fractions of shapes. Simple equivalent fractions. Simplify fractions. Familiar fraction of a quantity.	Fractions of shapes. Equivalent fractions. Simplify fractions. Fraction of a quantity.	Compare two fractions. Order simple fractions.	Compare two or more fractions. Order fractions.
	Construction & Loci	Measure and draw line segments and angles accurately. Use standard conventions for denoting sides and angles.	Measure and draw line segments and angles accurately. Use standard conventions for denoting sides and angles.	Construct accurate triangles when given SSA, AAS, SSS.	Construct accurate triangles when given SSA, AAS, SSS.
	Probability	Probability language introduced and used. Probability scale.	Probability language used. Probability scale.	Simple probabilities using fractions and decimals. Link between probability of events occurring and not occurring.	Probabilities using fractions and decimals. Link between probability of events occurring and not occurring.
Summer 1	Further Algebra Skills	Substitute +/- integer values into simple formulae and expressions involving the four operations. Compare numbers using inequality signs. Examples of integers that satisfy simple given inequalities.	Substitute +/- integer values into formulae and expressions involving the four operations. Compare numbers using inequality signs. Examples of integers that satisfy given inequalities.	Substitute +/- integer values into formulae and expressions including those with brackets and indices. Inequalities on number lines. Solve one variable, one operation linear inequalities with positive integer answers.	Substitute any values into formulae and expressions including those with brackets and indices. Inequalities on number lines. Solve one variable, one operation linear inequalities.
	Shapes & Transformations	Introduce properties of 2D and 3D shapes, using the correct language. Reflective symmetry. Reflect simple 2D shape in a horizontal or vertical mirror line. Describe a simple reflection by showing the mirror line.	Properties of 2D and 3D shapes, using the correct language. Reflective symmetry. Reflect 2D shape in a horizontal or vertical mirror line. Describe a reflection by showing the mirror line.	Compare and classify geometric shapes based on properties. Nets of basic 3D shapes. Rotational symmetry. Simple congruent shapes. Find missing sides or angles in congruent shapes. Reflect simple 2D shapes in mirror line on coordinate grid. Describe reflections.	Compare and classify any geometric shapes based on properties. Nets of 3D shapes. Rotational symmetry. Congruent shapes. Find missing sides or angles in congruent shapes. Reflect 2D shapes in mirror line on coordinate grid. Describe reflections.



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				Rotate simple 2D shapes on a coordinate grid. Describe rotations.	Rotate 2D shapes on a coordinate grid. Describe rotations.
Summer 2	Area & Volume	Area of any shape by counting squares. Area of a rectangle. Surface area of a cube. Volume of cube or cuboid by counting squares then using formula.	Area of rectangles and triangles. Surface area of a cube or cuboid. Volume of a cube or cuboid.	Area of rectangles, triangle, parallelograms and trapeziums. Surface area of triangular prisms and square-based pyramids. Volume of a simple prism.	Area of rectangles, triangle, parallelograms and trapeziums. Surface area of triangular and other prisms and square-based pyramids. Volume of a prism.
	Percentages	Percentages of shapes. Basis percentage of a quantity.	Simple percentage of a quantity. Increase/decrease by a simple percentage.	Any percentage of a quantity. Increase/decrease by a percentage.	Any percentage of a quantity. Increase/decrease by any percentage.
	Enlargement & Similarity	Enlarge simple 2D shapes by positive integer scale factor. Identify scale factor of a simple enlargement.	Enlarge 2D shapes by positive integer scale factor. Identify scale factor of an enlargement.	Enlarge 2D shape by positive scale factor. Similar 2D shapes. Find missing sides in simple similar 2D shapes.	Enlarge 2D shape by positive scale factor, including fractions. Similar 2D shapes. Find missing sides in simple similar 2D shapes.