Curriculum Area: Mathematics

Long-Term Plan

Academic Year 2023 – 2024

	Autumn Term	Spring Term	Summer Term
Years 7/8	<u>Autumn 1</u>	<u>Spring 1</u>	<u>Summer 1</u>
	Number Skills • Place value • Number operations Factors, multiples & primes • Decimals and accuracy • Directed numbers • Powers and roots • BIDMAS	**Area and perimeter** • 2D and 3D shapes • Area of squares, rectangles, triangles, trapeziums and parallelograms • Perimeter of polygons **Angles** • Types of angles • Measuring and drawing angles • Angles • Basic angle facts	**Probability** • Probability scale • Probability of a single event • Two way tables • Frequency trees **Algebra** • Simplifying expressions • Substitution
	<u>Autumn 2</u>	<u>Spring 2</u>	<u>Summer 2</u>
	Fractions, decimals and percentages • FDP conversions • Fraction of an amount Equivalent fractions • Operations with fractions Percentage of an amount **Ratio** • Simplifying ratios • Sharing an amount in a ratio • Ratios and fractions Converting metric and imperial units	**Averages, range and representing data** • Averages and range from lists of data • Tally charts • Bar charts • Pictograms	**Algebra** • Expanding single brackets • Factorising single brackets **Co-ordinates and straight line graphs** • Plotting co-ordinates • Using a table of values Horizontal and vertical lines

	Autumn Term	Spring Term	Summer Term
Year 9	<u>Autumn 1</u>	<u>Spring 1</u>	<u>Summer 1</u>
	• Basic number and directed numbers • Powers and roots • Factors and multiples • Angles • Triangles and quadrilaterals	• Sequences • Basic probability • Ratio and proportion	• Equations • Collecting and representing data/statistical measures
	<u>Autumn 2</u>	<u>Spring 2</u>	<u>Summer 2</u>
	• Basic algebra • Basic decimals • Rounding and estimating • Co-ordinates and linear graphs • Basic fractions	• Basic percentages • Perimeter, area and volume • Circumference and area of circles and sectors	• Transformations • Scatter graphs • Index laws • Standard form • 2D representations of 3D shapes

	Autumn Term	Spring Term	Summer Term
Year 10	<u>Autumn 1</u>	<u>Spring 1</u>	<u>Summer 1</u>
	Foundation • Pythagoras' theorem • Calculating with percentages • Measures **Higher** • Upper and lower bounds • Calculating with percentages • Surds • Pythagoras' theorem in 2D and 3D	**Foundation** • Congruence and similarity • Inequalities • Direct and inverse proportion **Higher** • Scale diagrams and bearings • Constructions and loci • Volume and surface area • Congruence and similarity	**Foundation** • Simultaneous equations • Scale diagrams and bearings **Higher** • Angles in polygons • Inequalities • Solving quadratic equations
	<u>Autumn 2</u>	<u>Spring 2</u>	<u>Summer 2</u>
	Foundation • Statistical measures • Angles in polygons • Constructions and loci • Algebra recap and extension **Higher** • Introduction to trigonometry • Collecting and representing data • Direct and inverse proportion • Re-arranging formulae	**Foundation** • Perimeter, area and volume • Circumference and area • Linear graphs **Higher** • Linear graphs • Measures • Real life graphs	**Foundation** • Real life graphs • Review of basic probability • Further probability **Higher** • Quadratic graphs • Cubic and reciprocal graphs • Simultaneous equations

	Autumn Term	Spring Term	Summer Term
	<u>Autumn 1</u>	<u>Spring 1</u>	<u>Summer 1</u>
Year 11	**Foundation** • Quadratics, rearranging formula and identities • Volume and surface area **Higher** • Algebraic proof • Trigonometry • Growth and decay	**Foundation** • Solving quadratic equations • Quadratic graphs **Higher** • Quadratic inequalities • Further graphs	**Foundation** Review, revision and catch up **Higher** Gradients and rates of change Area under a curve Algebraic fractions
	<u>Autumn 2</u>	<u>Spring 2</u>	<u>Summer 2</u>
	Foundation • Algebra and graphs • Upper and lower bounds • Trigonometry **Higher** • Equation of a circle • Vectors • Further probability	**Foundation** • Non-linear graphs • Growth and decay • Vectors **Higher** • Functions • Transforming functions • Iteration • Circle theorems	Review, revision and catch up