



Curriculum Overview - Maths

	Autumn Term – Terms 1 and 2	Spring Term – Terms 3 and 4	Summer Term – Terms 5 and 6
Year 7	<ul style="list-style-type: none"> • Time • Place value • Addition, subtraction, multiplication and division • Negative numbers • Factors, multiples, primes and BIDMAS • Prime factors, HCF and LCM • Fractions • Perimeter and area of regular and compound 2D shapes 	<ul style="list-style-type: none"> • Fractions, decimals and percentages • Percentage of an amount • Ratio and proportion • Algebraic notation • Simplify expressions and expand brackets • Solve equations and rearrange equations • Sequences and nth term • Naming angles, drawing and measuring angles and finding angles in polygons 	<ul style="list-style-type: none"> • Collect and organise data • Interpret and read tables • Calculating averages • Interpret data graphs • Properties of 2D and 3D shapes • Volume of prisms
Year 8	<ul style="list-style-type: none"> • Addition, subtraction, multiplication and division • Rounding • Negative numbers • Powers and roots • Prime factors, HCF and LCM • Fractions, decimals and percentages • Area • Area and circumference of circles • Compound measures 	<ul style="list-style-type: none"> • Linear graphs, • Simplify expressions, expand and factorise. • Solve linear equations • Change the subject of a formula • Solve linear inequalities • Find and use the nth term • Angles in parallel lines • Interior and exterior angles in polygons 	<ul style="list-style-type: none"> • Simplify and share in a ratio • Direct and inverse proportion • Percentage increase and decrease • Constructions • Congruent and similar shapes • Volume and surface area of prisms • Averages • Using graphs to represent data • Describe chance/outcomes from the language of probability



Year 9	<ul style="list-style-type: none"> • Estimation • Prime factors, LCM and HCF • Index laws • Standard form • Fractions, decimals and percentages • Ratio and proportion • Pie charts • Frequency polygons • Averages from grouped data 	<ul style="list-style-type: none"> • Calculate probability • Simplify algebra expressions with factorising and expanding • Solve algebra equations with unknowns on both sides • Solve inequalities • Using formula in algebra • Rearrange formula • nth term of a sequence • Plotting graphs • Real-life graphs 	<ul style="list-style-type: none"> • Area and perimeter of a range of shapes • Volume and surface area of prisms • Angles in polygons and parallel lines • Pythagoras theorem and trigonometry ratios • Transformations
Year 10 Foundation	<ul style="list-style-type: none"> • Integers and place value • Decimals • Indices, powers and roots • Manipulate and simplify expressions • Substitute into formulae • Fractions, decimals and percentages • Tables, charts and graphs 	<ul style="list-style-type: none"> • Equations and inequalities • Sequences • Properties of shapes and angle facts • Perimeter, area and volume • Linear graphs • Real-life graphs 	<ul style="list-style-type: none"> • Statistics, sampling and averages • Simplify and share into a ratio • Direct proportion tables and recipes • Convert between currencies • Pythagoras • Trigonometry • Probability • Constructions, loci and bearings

Year 10 Higher	<ul style="list-style-type: none"> • Calculating, checking and rounding. • Indices, roots, and reciprocals • Factors, multiples, standard form and surds • Simplifying and factorising expressions, setting up and solving equations • Sequences • Fractions and percentages • Simplify and share into a ratio • Direct proportion tables and recipes • Convert between currencies • Polygons, angles and parallel lines • Pythagoras and trigonometry 	<ul style="list-style-type: none"> • Averages and range • Representing and interpreting data • Linear graphs and coordinate geometry • Quadratic, cubic and other graphs • Real-life graphs • Perimeter, area and circles • 3D shapes, volume and surface area • Accuracy and bounds • Quadratic equations • Simultaneous equations • Inequalities • Probability 	<ul style="list-style-type: none"> • Compound measures • Transformations • Constructions • Similarity and congruence • Graphs of trigonometric functions • Further trigonometry • Equations and graphs
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Year 11 Foundation	<ul style="list-style-type: none"> • Compound measures • Percentages • Money problems • Graphs of quadratic equations • Circles, cylinders, cones, and spheres • Fractions and reciprocals • Indices and standard form • Congruent shapes • Transformations • Vectors • Rearranging equations • Graphs of cubic and reciprocal functions • Simultaneous equations 	<ul style="list-style-type: none"> • Revision following a precision plan tailored to each class 	<ul style="list-style-type: none"> • Revision following a precision plan tailored to each class
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Year 11 Higher	<ul style="list-style-type: none">• Collecting data• Cumulative frequency, box plots and histograms• Circle theorems• Circle geometry• Changing the subject of complex formulae• Solving equations from algebraic fractions• Rationalising surds• Algebraic proof• Vectors and Geometric proof• Reciprocal and exponential graphs• Area under graphs• Direct and inverse proportion	<ul style="list-style-type: none">• Revision following a precision plan tailored to each class	<ul style="list-style-type: none">• Revision following a precision plan tailored to each class
Year 12 Maths	<ul style="list-style-type: none">• Quadratics• Equations and inequalities• Graphs and transformations• Straight line graphs• Circle geometry• Algebraic methods• The Binomial expansion• Trigonometric ratios• Trigonometric identities• Vectors• Exponentials and logarithms	<ul style="list-style-type: none">• Data collection• Measures of location and spread• Differentiation• Integration• Representations of data• Correlation• Radians• Trigonometric functions• Probability	<ul style="list-style-type: none">• Statistical distributions• Hypothesis testing• Partial fractions• Functions and graphs• Trigonometry and modelling• Parametric equations

Year 12 Further Maths	<ul style="list-style-type: none"> • Complex numbers • Argand diagrams • Series • Roots of polynomials • Volumes of revolution • Matrices • Proof by induction • Linear transformations 	<ul style="list-style-type: none"> • Vectors • Impulse and momentum • Work, energy and power • Elastic collisions in 1D • Algorithms • Graphs and networks • Algorithms on graphs • Route inspection • Linear programming 	<ul style="list-style-type: none"> • Elastic strings and springs • Differentiation • Integration • The travelling salesman problem • The simplex algorithm • The planarity algorithm • Floyd's algorithm • Resource histograms and scheduling diagrams
Year 12 Core Maths	<ul style="list-style-type: none"> • Tax and National insurance • Percentages, Interest rates and AER • Student loans and APR • Currency rates and budgeting • Critical Path Analysis • Expectation • Cost Benefit Analysis 	<ul style="list-style-type: none"> • Data types • Collecting and sampling data • Representing data numerically • Representing data diagrammatically • Cost Benefit Analysis • Critical Analysis • The modelling cycle • Fermi estimation 	<ul style="list-style-type: none"> • Revision for exams following a precision plan
Year 13 Maths	<ul style="list-style-type: none"> • The Binomial expansion • Sequences and series • Differentiation • Integration • Modelling in mechanics • Constant acceleration • Forces and motion • Variable acceleration • Vectors 	<ul style="list-style-type: none"> • Regression, correlation and hypothesis testing • Conditional probability • The normal distribution • Moments • Forces and friction • Projectiles • Applications of forces • Further kinematics 	<ul style="list-style-type: none"> • Revision for exams following a precision plan



Year 13 Further Maths	<ul style="list-style-type: none">• Series• Hyperbolic functions• Methods in differential equations• Complex numbers• Methods in calculus• Volumes of revolution	<ul style="list-style-type: none">• Modelling with differential equations• Elastic collisions in 2D• Polar coordinates	<ul style="list-style-type: none">• Revision for exams following a precision plan
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