MATHS CURRICULUM BY YEAR GROUP

Curriculum Year 7

AUTUMN TERM	Autumn 1	• The Number system • Counting, comparing and ordering numbers including negative numbers and fractions • Calculation methods – written and mental • Exploring fractions, decimals and percentages
	Autumn 2	• Visualising and constructing • Investigating properties of shapes (cubes, cuboids, prisms, cylinders, pyramids, cones and spheres) • Derive and apply the properties and definitions of: special types of quadrilaterals, including square, rectangle, parallelogram, trapezium, kite and rhombus; and triangles • Algebraic proficiency. Use and interpret algebraic notation, simplify and manipulate algebraic expressions
SPRING Term	SPRING 1	• Generate terms of a sequence from a term-to-term rule • Use standard units of measure and related concepts • Use standard units of mass, length, time, money and other measures • Using decimal quantities where appropriate • Change freely between related standard units • In numerical contexts measure line segments and angles in geometric figures
	SPRING 2	• Calculating fractions, decimals and percentages • Solving equations and inequalities • Calculate perimeters of 2D shapes • Area of triangles, parallelograms, trapezia • Calculate surface area of cuboids • Calculate volume of cuboids • Use standard mathematical formulae
SUMMER 3	Summer 1	• Coordinates in all four quadrants • Understand and use lines parallel to the axes, y = x and y = -x • Solve geometrical problems on coordinate axes • Identify, describe and construct congruent shapes • Rotation, reflection and translation • Describe translations as 2D vectors
	Summer 2	• Frequency tables, bar charts, pie charts and pictograms for categorical data • Interpret, analyse and compare data sets through appropriate measures of central tendency (median, mean, mode and modal class) and spread (range)

Curriculum Year 8

Autumn Term	Autumn 1	• The Number system (prime numbers, highest common factor, lowest common multiple, prime factorisation) • Calculation methods for integers, decimals and simple fractions (proper and improper), and mixed numbers – all both positive and negative • Simplify and manipulate algebraic expressions • Substitute numerical values into
	Autumn 2	• Identify, describe and construct similar shapes, including on coordinate axes, by considering enlargement • Plans and elevations of 3D shapes Scale factors, scale diagrams and maps • Exploring fractions, decimals and percentages • Theoretical probability, expectation and the 0 - 1 probability scale • Experimental probability • Sample space
Spring Term	Spring 1	• Division of a quantity into two parts as a ratio; apply ratio to real contexts and problems • Use proportion as equality of ratios • Use and conversion of compound units • Generate terms of a sequence from either a term-to-term or a position-to-term rule • Calculate the nth term of linear sequences
	Spring 2	• Understand and use alternate and corresponding angles on parallel lines • Derive and use the sum of angles in a triangle (to derive properties of regular polygons) • Interpret fractions and percentages as operators • Solve problems involving percentage change • Calculate exactly with fractions
Summer 3	Summer 1	• Solve linear equations with the unknown on both sides of the equation • Plot graphs of equations that correspond to straight-line graphs • Identify and interpret gradients and intercepts of linear functions graphically and algebraically • Recognise, sketch and interpret graphs of linear functions and simple quadratic functions
	Summer 2	• Identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference • Calculate perimeters and areas of 2D composite shapes, including circles • Construct theoretical possibility spaces for combined experiments with equally likely outcomes and use these to calculate theoretical probabilities

Curriculum Year 9

Autumn Term	Autumn 1	Calculations, checking and rounding Indices, roots, reciprocals and hierarchy of operations Factors, multiples and primes Standard form and surds
	Autumn 2	Algebra: the basics Setting up, rearranging and solving equations Sequences
Spring Term	Spring 1	Averages and range Representing and interpreting data Scatter graphs
	Spring 2	Fractions Percentages Ratio and proportion
Summer 3	Summer 1	Polygons, angles and parallel lines Pythagoras' Theorem and trigonometry
	Summer 2	Graphs: the basics and real-life graphs Linear graphs and coordinate geometry Quadratic, cubic and other graphs

Curriculum Year 10

Autumn Term	Autumn 1	Probability Averages and range Pythagoras and trigonometry
	Autumn 2	Algebra Surface area and volume Compound measures
Spring Term	Spring 1	Transformation Similarity and congruence
	Spring 2	Circle theorems Trial and improvement
Summer 3	Summer 1	Trigonometry Sine and cosine rule
	Summer 2	Quadratic functions, equations and graphs Surds

Curriculum Year 11

Autumn Term	Autumn 1	Simultaneous equations Index notation and surds Circle theorems
	Autumn 2	Fractions, decimals and % Quadratic functions, equations and graphs
Spring Term	Spring 1	Vectors Further graphs and functions
	Spring 2	Transformations of functions
Summer 3	Summer 1	Revision/Exams
	Summer 2	Revision/Exams