

Our course is built around a unique pedagogy that's been created by leading mathematical educational researchers and Key Stage 3 teachers. We use an innovative learning structure built upon the three Mathematical pillars of Fluency, Reasoning and Problem Solving. We have adapted our curriculum in line with the Jesmond Park Academy ethos of Direct Instruction, which allows our teachers to impart their expertise in an efficient and effective way. Our content follows a "spiral" model that ensures key content is regularly revisited, consolidated and extended. Our curricular-spiral is supported with a carefully designed homework booklet that encourages the regular revisiting of key mathematical knowledge.

Topic	
Shape, Space and Measure	
Numbers and the Number System	
Algebra	
Data Handling and Statistics	
Algebra/Geometry/Calculus	

Maths Curriculum Content Summary

	YEAR 7	YEAR 8	YEAR 9	FOUNDATION Curriculum	Year 10	Year 11	A-Level Maths
Support				GCSE (9-1) Foundation	GCSE (9-1) Foundation		Year 12
	Analysing and displaying data	Number properties and calculations	Number calculations	Number	Quadratic equations and graphs	Algebraic Expressions	Algebraic Methods
	Calculating	Shapes and measures in 3D	Sequences and equations	Algebra	Perimeter, area and volume 2	Equations and Inequalities	Functions and Graphs
	Expressions, functions and formulae	Statistics	Statistics	Graphs, tables and charts	Fractions, indices and standard form	Graphs and Transformations	Sequences and Series
	Graphs	Expressions and equations	Fractions, decimals and percentages	Fractions and percentages	Congruence, similarity and vectors	Straight Line Graphs	The Binomial Expansion
	Factors and multiples	Decimals calculations	Geometry in 2D and 3D	Equations, inequalities and sequences	More algebra	Circles	Radians
	Decimals and measures	Angles	Algebraic and real-life graphs	Angles		Algebraic Methods	Trigonometric Functions
	Angles and lines	Number properties	Multiplicative reasoning	Averages and range		The Binomial Expansion	Trigonometry and Modelling
	Measuring and shapes	Sequences	Algebraic and geometric formulae	Perimeter, area and volume 1		Trigonometric Ratios	Parametric Equations
	Fractions, decimals and percentages	Fractions and percentages	Probability	Graphs		Trigonometric Identities and Equations	Differentiation
	Transformations	Probability	Polygons and transformations	Transformations		Trigonometric Identities and Equations	Numerical Methods
Main Curriculum				Ratio and proportion		Vectors	Integration
	Analysing and displaying data	Number	Indices and standard form	Right-angled triangles		Differentiation	Vectors
	Number skills	Area and volume	Expressions and formulae	Probability		Integration	
	Expressions, functions and formulae	Statistics, graphs and charts	Dealing with data	Multiplicative reasoning		Exponentials and Logs	
	Decimals and measures	Expressions and equations	Multiplicative reasoning	Constructions, loci and bearings		Data Collection	Regression, Correlation and Hypothesis Testing
	Fractions	Real-life graphs	Constructions	Year 10	Year 11	Measures of Location and Spread	Conditional Probability
	Probability	Decimals and ratio	Equations, inequalities and proportionality	HIGHER Curriculum		Representations of Data	The Normal Distribution
	Ratio and proportion	Lines and angles	Circles, Pythagoras and prisms	GCSE (9-1) Higher	GCSE (9-1) Higher	Correlation	
	Lines and angles	Calculating with fractions	Sequences and graphs	Number	Circle theorems	Probability	
	Sequences and graphs	Straight-line graphs	Probability	Algebra	More algebra	Statistical Distributions	
	Transformations	Percentages, decimals and fractions	Unit10 Comparing shapes	Interpreting and representing data	Vectors and geometric proof	Hypothesis Testing	
Challenge				Fractions, ratio and proportion	Proportion and graphs	Modelling in Mechanics	Moments
	Analysing and displaying data	Factors and powers	Powers and roots	Angles and trigonometry		Constant Acceleration	Forces and Friction
	Number skills	Working with powers	Quadratics	Graphs		Forces and Motion	Application of Forces
	Equations, functions and formulae	2D shapes and 3D solids	Inequalities, equations and formulae	Area and volume		Variable Acceleration	Further Kinematics
	Fractions	Real-life graphs	Collecting and analysing data	Transformation and constructions		A-Level Further Maths	
	Angles and shapes	Transformations	Multiplicative reasoning	Equations and inequalities		Year 12	Year 13
	Decimals	Fractions, decimals and percentages	Non-linear graphs	Probability		Complex Numbers	Complex Numbers
	Equations	Constructions and loci	Accuracy and measures	Multiplicative reasoning		Argand Diagrams	Series
	Multiplicative reasoning	Probability	Graphical solutions	Similarly and congruence		Series	Methods in Calculus
	Perimeter, area and volume	Scale drawings and measurements	Trigonometry	More trigonometry		Roots of Polynomials	Volumes of Revolution
	Sequences and graphs	Graphs	Mathematical reasoning	Further statistics		Volumes of Revolution	Polar Coordinates
						Matrices	Hyperbolic Functions
						Level 2 Further Maths	
						Linear Transformations	Methods in Differential Equations
						Number	Proof by Induction
						Algebra	Modelling with Differential Equations
						Vectors	
						Coordinate Geometry (2D)	Vectors
						Calculus	Conic Sections
						Matrix Transformations	Inequalities
						Geometry	The t-formulae
							Numerical Methods
							Taylor Series
							Methods in Calculus
							Numerical Methods
							Reducible Differential Equations
							Algorithms
							Graphs and Networks
							Graphs and Networks
							Route Inspection
							Algorithms on Graphs
							The Travelling Salesman Problem
							Route Inspection
							The Simplex Algorithm
							Linear Programming
							Critical Path Analysis
							Critical Path Analysis