Year 9 – MATHEMATICS Programme of Study

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Ratio and Proportion • Unit ratios • Convert between ratio's and equivalent fractions • Solving problems involving ratio • Combining ratio **Bearings** • Draw, measure and calculate bearings **Standard Form** • Write large and small numbers in standard form • Compare and order numbers in standard form **Pythagoras and Trigonometry** • Pythagoras problems in 3D • Calculate side lengths and angles in right angles triangles using trigonometry **Compound Measures** • Density and Pressure **Milestone Assessment: Ratio**	**Statistics** • Frequency polygons / Stem and leaf diagrams • Cumulative Frequency Graphs (Higher only) **Algebra** • Factorise quadratic expressions • Inequalities • Simultaneous Equations **Percentages** • Financial maths • Reverse percentages **Graphs** • Gradient and distance between two points **3D solids** • Volume/surface area of pyramids and spheres **Milestone Assessment: End of term non-calculator**	**Preparation for exams: revisiting topics from years 7, 8 and 9 autumn term** **Milestone Assessment: End of KS3** • **Paper 1: 60 minutes (non-calculator)** • **Paper 2: 60 minutes (calculator)** **After the exams:** • Assessment feedback • Responsive teaching (revisiting weaker topics) • Financial Maths Unit	**Number Types and Properties** • Rational and irrational numbers • Reciprocals • Surds (Higher only) **Algebra** • Factorising harder quadratics • Substitution • Substitution of surds (Higher only) **Statistics** • Time Series • Sampling methods • Capture-recapture (Higher only) • Moving averages • Logic and set notation	**Estimation** • Estimate calculations • Bounds • Calculations with bounds (higher only) **Fractions and Decimals** • Terminating and recurring decimals • Convert between recurring decimals and fractions (higher only) **3D shapes** • Use isometric paper to draw cuboids • Plans and elevations • Nets **Milestone Assessment: 2 exam papers**	**Preparation for exams** **Paper 1: 50 minutes (non-calculator)** **Paper 2: 50 minutes (calculator)** **After the exams:** • Assessment feedback • Responsive teaching (revisiting weaker topics) • Problem solving **Algebra** • Recap linear graphs (foundation) • Gradient of perpendicular lines (higher) • Plot quadratic and cubic graphs (higher) • Plot reciprocal and exponential graphs (higher)