

Year 10 – MATHEMATICS Programme of Study

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Sequences</p> <ul style="list-style-type: none"> • Square, cube, triangular number sequences • Linear sequences • Fibonacci sequences • Geometric sequences • Quadratic sequences (H) <p>Algebra</p> <ul style="list-style-type: none"> • Simplifying algebraic expressions • Expanding brackets and factorising • Completing the square (H) • Algebraic fractions (H) <p>Pythagoras and Trigonometry</p> <ul style="list-style-type: none"> • Apply Pythagoras in range of contexts • Calculate side lengths and angles in right angles triangles using trigonometry • Sine and Cosine rule (H) • Sine rule for area (H) 	<p>Similarity and Congruence</p> <ul style="list-style-type: none"> • Criteria for congruent triangles • Geometric arguments and proof (H) • Length, area and volume scale factors (H) <p>Ratio and Proportion</p> <ul style="list-style-type: none"> • Ratio notation for map scales • Unit conversion • Scale drawing and bearings <p>Milestone Assessment: End of term calculator</p>	<p>Solving Equations</p> <ul style="list-style-type: none"> • Linear equations • Quadratic equations (H) • Simultaneous Equations • Iteration to estimate solutions (H) • Linear and quadratic equations <p>Perimeter, Area & Volume</p> <ul style="list-style-type: none"> • Sector area • Arc length and perimeter of a sector • Area of a segment (higher only) • Volume and surface area of prisms and non prisms <p>Angles</p> <ul style="list-style-type: none"> • Recap and consolidation of KS3 content (F) Circle Theorems (H) <p>Inequalities</p> <ul style="list-style-type: none"> • Solve and represent linear inequalities • Solve quadratic inequalities algebraically and graphically (H) 	<p>Probability</p> <ul style="list-style-type: none"> • Recap and consolidation of KS3 content (foundation only) • Solve problems using algebraic probabilities (higher only) • Product rule (higher only) • Conditional probability using venn diagrams (higher only) <p>Ratio and Proportion</p> <ul style="list-style-type: none"> • Recap and consolidation of KS3 content • Direct and Inverse proportion problems (H) 	<p>Preparation for exams:</p> <p>Milestone Assessment: GCSE papers</p> <p>Paper 1: 90 minutes (non-calculator)</p> <p>Paper 2: 90 minutes (calculator)</p> <p>After the exams:</p> <ul style="list-style-type: none"> • Assessment feedback • Responsive teaching (revisit weaker topics) <p>Algebra</p> <ul style="list-style-type: none"> • SUVAT formulae • Re-arrange more complex formulae • Functions (H) 	<p>Transformations</p> <ul style="list-style-type: none"> • Rotation, reflection, enlargement • Translations • Describing transformations • Invariant points (H) <p>Vectors</p> <ul style="list-style-type: none"> • Addition and Subtraction of vectors • Multiplication of vectors by a scalar • Use vectors to construct geometric arguments and proof (H) <p>Milestone Assessment: End of term non-calculator</p>