

Implementation Curriculum Overview (Year 11) Maths

A learner in Year 11 will cover a balanced curriculum, covering the 5 branches of mathematics: Number, Ratio, Algebra, Shape, statistics & probability. The three forms of Mathematical knowledge will be taught: Declarative knowledge, procedural knowledge and conditional knowledge

IMPLEMENTATION – planned and sequenced towards cumulative knowledge and skills

| Term 1 | Set 1 – Higher | Set 2 & 3 Higher | Set 4 & 5 - Foundation | Autumn Summative Assessment |
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| | <ul style="list-style-type: none"> ➤ Rearranging Harder Formulae ➤ Functions ➤ Simultaneous Equations ➤ Error Intervals and Bounds ➤ Surds ➤ Recurring Decimals ➤ Quadratic Sequences ➤ Algebraic Fractions ➤ Inequalities ➤ Direct and Inverse Proportion ➤ Forming and Solving Equations ➤ Completing the Square ➤ Cumulative Frequency + Box Plot ➤ Histograms ➤ Averages from a Table ➤ Types of Graph+ Sketching Quadratics ➤ Parallel + Perpendicular Lines ➤ Equation of a Tangent to a Circle ➤ Ratio ➤ Sine/Cosine Rule ➤ Compound Measures ➤ Rates of Change ➤ Sine/Cosine Rule ➤ Vector Geometry ➤ Proof ➤ Enlargement/Translation ➤ Sector + Arc Length ➤ Probability ➤ Venn Diagrams | <ul style="list-style-type: none"> ➤ Forming and Solving Equations ➤ Factorising ➤ Solving Simultaneous Equations ➤ Solving Quadratics by Factorising ➤ Solving Quadratics by Using the Formulae ➤ Rearranging Formulae ➤ Plotting Graphs ➤ Estimation and Rounding ➤ Multiplying and Dividing Decimals ➤ Recurring Decimals ➤ Products of Primes ➤ Calculations in Standard Form ➤ Inequalities ➤ Functions ➤ Ratio ➤ Percentage Change ➤ Compound Interest ➤ Product Rule for Counting ➤ Conversions ➤ Speed/Distance/Time ➤ Density ➤ Quadratic Sequences ➤ Advanced Trigonometry ➤ Cones and Spheres ➤ Circle Theorems | <ul style="list-style-type: none"> ➤ Straight Line Graphs ➤ Plotting Graphs ➤ Pythagoras Theorem ➤ Trigonometry ➤ Factorising Quadratics ➤ Solving Quadratics ➤ Area and Perimeter ➤ Circles ➤ Percentages ➤ Constructions and Loci ➤ Column Vectors ➤ Value for Money Questions ➤ Forming and Solving Equations ➤ HCF/LCM ➤ Estimation ➤ 4 operations on fractions ➤ Money Questions ➤ Negative Numbers ➤ Time Questions ➤ Angles in Parallel Lines ➤ Angles in Polygons ➤ Recipe Style Questions ➤ Speed/Distance/Time ➤ Area of Shapes ➤ Real Life Graphs ➤ Simultaneous Equations ➤ Error Intervals ➤ Rearranging Formulae ➤ Volume and Surface Area ➤ Transformations | <p>Questions based on the content taught covering all 3 AOs:</p> <ul style="list-style-type: none"> ➤ AO1: Use and apply standard techniques ➤ AO2: Reason, interpret and communicate mathematically ➤ AO3: Solve problems within mathematics and in other contexts |

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| Term 2 | Set 1 & 2 – Higher | Set 2 & 3 Higher | Set 3 & 4 - Foundation | Spring Summative Assessment |
| | <ul style="list-style-type: none"> ➤ Rotation/Reflection ➤ Transformation of Graphs ➤ Volume/Surface Area of Prisms ➤ Volume/Surface Area of Spheres + Cones ➤ Circle Theorems ➤ Angles in polygons ➤ Similar Shapes | <ul style="list-style-type: none"> ➤ Circle Theorems ➤ Upper and Lower Bounds ➤ Gradients of Curves ➤ Areas Under Curves ➤ Exact Trig Values ➤ Plans + Elevations ➤ Transformations of Graphs ➤ Simultaneous Equations ➤ Linear/Quadratic ➤ Iteration ➤ Proof ➤ Vectors ➤ Congruence and Similar Shapes ➤ Completing the Square ➤ 3D Trig ➤ Equation of a Circle | <ul style="list-style-type: none"> ➤ Scatter Graphs ➤ Averages from Frequency Tables ➤ Inequalities ➤ Ratio: Maps/Scales ➤ Venn Diagrams ➤ Probability ➤ Metric Conversions ➤ Pie Charts | <p>Questions based on the content taught covering all 3 AOs:</p> <ul style="list-style-type: none"> ➤ AO1: Use and apply standard techniques ➤ AO2: Reason, interpret and communicate mathematically ➤ AO3: Solve problems within mathematics and in other contexts <p>30% of the marks will be awarded for topics from term 1, 70% of the marks from topics taught in term 2.</p> |
| Term 3 | Set 1 – Higher | Set 2 & 3 Higher | Set 3 & 4 - Foundation | Summer Summative Assessment |
| | <ul style="list-style-type: none"> ➤ Revision for GCSE Maths | <ul style="list-style-type: none"> ➤ Tangent to a Circle ➤ Regions ➤ Revision for GCSE Maths | <ul style="list-style-type: none"> ➤ Revision for GCSE Maths | GCSE Maths exam |