| Department: | Mathematics |
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Year 9 Course Summary:

In Year 9, students begin to study the foundational knowledge required for their GCSE Mathematics course. The curriculum covers key areas, including number, algebra, geometry, and data handling, with an emphasis on practical applications in topics such as Mechanics. Additionally, students will explore concepts beyond the standard syllabus, such as Matrices. Problem-solving skills are embedded throughout the course, and all students will participate in the Intermediate Maths Challenge.

**Linear Algebra**
Linear Graphs
Simultaneous Equations
Linear Inequalities

**Quadratic Algebra**
Expanding Brackets
Factorising Quadratics
Plotting Quadratics
Quadratic Sequences

**Trigonometry**
Pythagoras' Theorem
Trigonometry

**Powers, Roots, Decimals and Accuracy**
Squares, Cubes and Roots
Standard Form
Recurring Decimals
Rounding to Significant Figures
Estimation
Upper and Lower Bounds

**Compound Measures**
Speed and Density
Real Life Graphs
Pressure

**Engineering Maths**
Velocity/Time Graphs
Distance/Time Graphs

**Vectors**
Translations
Addition and Subtraction of Vectors
Parallel Vectors

**Probability**
Relative Frequency
Tree Diagrams for Independent Events

**Grouped Data**
Minimising bias
Frequency Polygons
Histograms
Mean of Grouped Data
Cumulative Frequency

**Matrices**
Adding and Subtracting Matrices
Multiplying Matrices
Matrix Transformations

IST Assessments

There will be assessments after each of the modules in bold and an assessment at the end of the year assessing all content covered in Year 9.