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| Department:   | Mathematics   |   |
| Year 9 Course Summary:  |   |   |
| <p>In year 9, students secure the foundations for their GCSE Mathematics course. This includes studying number, algebra, shape and space and data handling with an underlying focus on how to apply these in areas such as Mechanics. There is also an opportunity to study some topics outside of the syllabus, such as Matrices. Problem solving is integrated throughout the course and all students are entered into the Intermediate Maths Challenge.</p>  |   |   |
| <p><b>Linear Algebra</b><br/>           Linear Graphs<br/>           Simultaneous Equations<br/>           Linear Inequalities</p> <p><b>Quadratic Algebra</b><br/>           Expanding Brackets<br/>           Factorising Quadratics<br/>           Plotting Quadratics<br/>           Quadratic Sequences</p> <p><b>Trigonometry</b><br/>           Pythagoras' Theorem<br/>           Trigonometry</p> <p><b>Powers, Roots, Decimals and Accuracy</b><br/>           Squares, Cubes and Roots</p> <p>Standard Form</p> <p>Recurring Decimals</p> <p>Rounding to Significant Figures</p> <p>Estimation</p> <p>Upper and Lower Bounds</p> | <p><b>Compound Measures</b><br/>           Speed and Density<br/>           Real Life Graphs<br/>           Pressure</p> <p><b>Engineering Maths</b><br/>           Velocity/Time Graphs<br/>           Distance/Time Graphs</p> <p><b>Vectors</b><br/>           Translations<br/>           Addition and Subtraction of Vectors<br/>           Parallel Vectors</p> | <p><b>Probability</b><br/>           Relative Frequency<br/>           Tree Diagrams for Independent Events</p> <p><b>Grouped Data</b><br/>           Minimising bias<br/>           Frequency Polygons<br/>           Histograms<br/>           Mean of Grouped Data<br/>           Cumulative Frequency</p> <p><b>Matrices</b><br/>           Adding and Subtracting Matrices<br/>           Multiplying Matrices<br/>           Matrix Transformations</p> |