



Curriculum Plan-Subject: **Mathematics**

Stage 10

Autumn Term	Spring Term	Summer Term
<p>Investigating Properties of shape - Calculate missing side lengths in similar triangles. Know how to use trigonometric relationships in 2-D situations (12 hours)</p> <p>Calculating - Know how to use fractional and negative indices. Calculate with numbers in standard form. Calculate using bounds of accuracy. (8 hours)</p> <p>Solving equations and Inequalities I - Solve pairs of simultaneous equations. Solve equations by iteration(8 hours)</p>	<p>Pattern Sniffing - Form and describe quadratic and geometric sequences using algebraic notation (4 hours)</p> <p>Solving equations and Inequalities II - Set up and solve inequalities in 2 variables using graphical notation(6 hours)</p> <p>Calculating Space - Find the volume and surface area of spheres, cones and other non regular solids. Use similarity to find missing side lengths, areas and volumes after enlargements have taken place. (10 hours)</p>	<p>Exploring fractions decimals and percentages - Covert between recurring decimals and fractions, Solve problems involving growth and decay (6 hours)</p> <p>Solving equations and inequalities III - Solve quadratic equations using a variety of different methods. (8 hours)</p> <p>Understanding Risk Know and use set notation for Venn diagrams. Use a variety of probability diagrams to calculate expected and theoretical probability results. (8 hours)</p>
HALF TERM		
<p>Mathematical Movement I - Perform and describe transformations on a co-ordinate grid including negative scale factor enlargements. (6hours)</p> <p>Algebraic proficiency - Tinkering - Extend knowledge of algebraic manipulation to involve calculation with algebraic fractions. (12 hours)</p> <p>Proportional reasoning - Use graphs and algebraic methods to set up and solve problems in direct and inverse proportion. Solve problems involving repeated proportional change(8 hours)</p>	<p>Conjecturing - Complete geometrical proof using appropriate notation. Know and use circle theorems to solve problems.(12 hours)</p> <p>Algebraic proficiency - visualising I- Plot and interpret graphs given in a variety of forms in context and comment on their key features (12 hours)</p>	<p>Analysing Statistics - Calculate values for stratified samples, use cumulative frequency curves and box plots (discrete) and continuous data(12 hours)</p> <p>Algebraic proficiency visualising II - Solve problems involving perpendicular gradients. Know and use the equation of a circle. (6 hours)</p> <p>Mathematical Movement II - Use vector notation to describe movement around a 2-D plane(4 hours)</p>

Bishop Milner Catholic College

