KS4 Curriculum Overview (Mathematics)

YEAR 11 Higher

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
• Circle Theorem • Trigonometry • Simultaneous equations • Re arranging formulae • Surds • More Circle theorem • More Trigonometry • Surds	▪ Use perpendicular bisector of a chord - circle theorem. ▪ Sketch Sine, Cosine & Tan graphs ▪ Simultaneous equations: Linear, Quadratic (Algebraically) ▪ Change the subject when the subject appears twice and there are powers. ▪ Surds: Expand ▪ Use angles in the same segment circle theorem. ▪ Sine rule for missing sides and angles ▪ Change the subject of a formula with algebraic fractions. ▪ Surds: Rationalise the denominator ▪ Use alternate segment circle theorem.	Circle Theorem, Trigonometry, Circle Theorem, Surds can be linked to careers such as: Engineering, Manufacturing, builders etc.
TERM 2 TOPIC/s	***Key Skills/Subject Links**	***Career links & BV**
• More Circle Theorem • More Trigonometry • Simultaneous equations • Proportions • Algebraic Fractions • Area of non-right-angle triangles • More Algebraic	• Use cyclic quadrilaterals circle theorem. • Cosine rule for missing sides and angles • Simultaneous equations: Linear, Circle (Algebraically) • Solve direct and inverse proportionality involving squares and cubes. • Simplify algebraic fractions. • A mixture of multi-step problems involving Sine and Cosine rules and 1/2.a.b.Sin(C) • Multiply and divide algebraic fractions.	Circle Theorem, Trigonometry, proportions, area can be linked to careers such as: Engineering, Manufacturing, builders etc.
TERM 3 TOPIC/s	***Key Skills/Subject Links**	***Career links & BV**
• 3D shapes • More Algebraic fractions • Equation of a straight line • Quadratics Graphs • Volume • Inequalities • Probability • More algebraic fractions • Quadratics Inequalities • Vector • Graphs Transformation	• 3D Pythagoras and Trig • Add and subtract algebraic fractions. • Find the equation of the tangent to a circle at a given point. • Interpret quadratic graphs relating to real-life situations. • Volume problems • Inequalities and set notation. • Identify conditional events, find probabilities using AND rule. Draw tree diagrams to work out probabilities. • Solve algebraic fractions with quadratics. • Solve quadratic inequalities by using a graphical representation. • Vector problems • Graph transformation: Translation of graph by y=f(x) + a, y = f(x+a) - identifying translations on a graph. Also transforming trig graphs.	3D shapes, Volume, probability, Trigonometry, Circle Theorem, Surds can be linked to careers such as: Engineering, Manufacturing, builders , researchers etc.

• Estimating area	• Trapezium rule to estimate area under a curve. **(The year 11 Higher maths topics have links to most other subjects, find some of these topics below. Physics, Biology, Chemistry, computer Science, Engineering, Business studies, Geography, and home economics etc)**	
TERM 4 TOPIC/s	▪ ***Key Skills/Subject Links**	***Career links & BV**
Revision		
TERM 5 TOPIC/s	▪ ***Key Skills/Subject Links**	***Career links & BV**
Revision		
TERM 6 TOPIC/s	▪ ***Key Skills/Subject Links**	***Career links & BV**
N/A		