KS4 Curriculum Overview (Mathematics)

YEAR 10 Foundation

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
- Proportions - Angles in Parallel lines - Quadratics - Compound Measures - Standard Form - Quadratics – Difference of two squares - Decimal numbers - Rounding	- Determine and use equations involving a constant for Direct/inversely proportional relationships. - Use angle facts to solve complex parallel line problems by forming and solving equations. - Recognise quadratic expressions and explain why it is called quadratic. Solve by factorisation quadratics where a=1 - Apply kinematics formulae with or without rearrangement. - Convert a range of standard form values to ordinary numbers and order values. - Recognise and factorise the difference of two squares and use this to solve quadratics. - Decimals: Adding, subtracting dividing etc - Rounding, Estimates and truncation	Proportions, compound measures, have links to careers such as: Finance Manufacturing, Business administrators etc.
TERM 2 TOPIC/s	***Key Skills/Subject Links**	***Career links & BV**
- HCF and LCM - Percentages - Fractions - Percentages, Decimals & Fractions - Ratio - Standard Form - Compound Measures	- Factors, Multiples Prime factorization, HCF and LCM - Percentage, of an amount, percentage change and reverse percentage change. - Fractions: Order, add, subtract, divide, multiply and finding a fraction of an amount. - Convert between PDF - Simplifying and sharing in a given ratio - Add and subtract in standard form. - Compound measures: SDT, PFA and DMV - Multiply and divide in standard form.	Ratio, Fractions, percentages LCM ad HCF have links manufacturing, business, computing programming
TERM 3 TOPIC/s	***Key Skills/Subject Links**	***Career links & BV**

• Units Measurement • Simultaneous equations • Indices • Surface area • Simultaneous problems • 2D Shapes	• Scales and units of measurements • Solve linear simultaneous equations: Graphically. • Solve Indices problems. • Surface area of a sphere and a hemisphere • Set up and solve simultaneous equations by appropriate method. • 2D shapes: Lines of symmetry, rotational symmetry	2D shapes, unit of measurement, surface area have links to careers such as: Engineering, Finance Manufacturing, builders, painters etc.
TERM 4 TOPIC/s	▪ ***Key Skills/Subject Links***	***Career links & BV***
• Surface Area • Quadratics Equations • Trigonometry • Volume • Cubic Graphs	▪ Surface area problems. ▪ Solve quadratics equations using graphs. ▪ Draw quadratic graphs from a table of values, identify lines of symmetry, minimum or maximum points. ▪ Use Cos to find missing side or angle. ▪ Calculate volume of a pyramid and cone ▪ Area of 2-D shapes including circles ▪ Use Tan to find missing side or angle. ▪ Recognize, draw, and find the roots of cubic graphs.	Trigonometry, surface area Volume have links to careers such as: Engineering, Manufacturing, builders, painters etc.
TERM 5 TOPIC/s	▪ ***Key Skills/Subject Links***	***Career links & BV***
• Volume • Pythagoras Theorem • Trigonometry • Transformation • Sequences • Probabilities	• Volume of prisms, and sphere • Pythagoras Theorem • SOHCAHTOA (recap) • Recognise, draw, and state the value of x for which the equation is not defined. • Transformation: Reflection, Translation, Rotation and Enlargement (recap) • Identify if a number is in a sequence or not.	Pythagoras Theorem, Trigonometry, sequences, Volume have links to careers such as: Engineering, Manufacturing, builders, painters, administrators etc.

• Problem Solving • Expressions	• Identify independent events, find probabilities using AND rule. Draw tree diagrams to work out probabilities. • Multi step problems using a mixture of Sin, Cos, Tan and Pythagoras. • Simplifying expressions by collecting like terms	
TERM 6 TOPIC/s	▪ ***Key Skills/Subject Links**	***Career links & BV**
• Expanding bracket • Factorizing • Linear equations • Simultaneous equations • Averages • Probability • Representing data • Linear sequences • Inequalities	• Expand single and double brackets. • Expanding Quadratics • Factorizing linear expression • Factorising quadratics • Solving linear equation • Solving linear Simultaneous equations • Averages from small data • Probability tree problems • Representing data: Pictogram, Bar Chart and Pie chart • Nth term of linear sequences • Compare sets of data using a measure of average and spread, recognise outliers and comment on their effect. • Solve linear inequalities. **(The year 10 foundation maths topics have links to many other subjects, find some examples below. Sciences, computer Science, Business studies computer studies, Geography home economics etc)**	Averages, simultaneous equations, sequences can be linked to careers such as: Manufacturing, forecaster, builders, finance etc.