KS4 Curriculum Overview (Mathematics)

YEAR 11 Foundation

TERM 1 TOPIC/s	*Key Skills/Subject Links	*Career links & BV
- LCM and HCF - Indices - Rounding - Estimates and approximation. - Bounds - Standard Form - Stem and a leaf diagram - Fractions - Decimals - Percentages - Simple and Compound interest - Venn diagram - Ratio - Recipes - Unitary method of calculation - Angles	- Express a number by the product of its prime factors. Use Venn diagram to find LCM and HCF. - Use the index rule for multiplication and division (indices with the same base). - Simplify an expression containing negative powers. Find the value of a positive number raised to a fractional power. - Round to significant places using large numbers and values less than hundredths. - Estimate calculations for a given calculation. - Give the upper and lower bound of a rounded number or measurement. - Convert in and out of standard form for a range of values, add, subtract, multiply and divide in standard form - Stem & leaf diagram, including a key. Find mode, median, range and quartiles from a stem and leaf diagram. - Add and subtract fractions with and without calculators. - Multiply and divide fractions with and without calculators. - Calculations using mixed numbers (to include calculations with decimals) - Working out a percentage of an amount, percentage change with and without calculator and expressing a number as a percentage. - Calculate an amount after adding simple interest and compound interest/depreciation. - Use Venn diagrams to show info, extract information from Venn diagrams and use set notation. - Ratio to fraction conversions and problem-solving ratios. - Increase and decrease amounts in a recipe as the number of servings varies. - Compare products using the unitary method. (Amount per £1, cost per unit amount) and so find the 'best buy'. - Find missing angles in triangles and quadrilaterals. - Calculate interior and exterior angles in regular polygons, find missing angles and calculate the number of sides for an unknown polygon.	Estimates and approximation, Recipes. Fractions, percentages LCM and HCF, Simple and compound interest can be linked to manufacturing, business, chefs, bankers, computer programming etc.

• Angles in polygons		
TERM 2 TOPIC/s	***Key Skills/Subject Links**	***Career links & BV**
• Compound Measures • Distance Time Graph • Interpret graphs • Perimeter • Metric Units • Area of compound shapes • Area of circle • Volume	▪ Calculate force, pressure, area. ▪ Draw and interpret Distance-time graphs. Calculate average speed from the gradient. ▪ Draw and interpret graphs from real data ▪ Find the perimeter of a range of 2D shapes. ▪ Recall metric conversions to convert between units. ▪ Use a formula to work out the area of compound shapes. ▪ Recall and use (and rearrange) the area of a circle given a radius or diameter. ▪ Calculate volume of a prism and a cylinder ▪ Calculate volume of a pyramid and cone.	Perimeter, metric units, area, volume have links to careers such as: Engineering, Manufacturing, builders, painters etc.
TERM 3 TOPIC/s	***Key Skills/Subject Links**	***Career links & BV**
• Probabilities • Averages • Scatter Graphs • Equation of a straight line • Transformation	• Probability scale, calculating from tables and diagrams. • Averages from small data and from frequency tables • Plotting equation of a straight line with or without a table. • Recapping reflection, translation, rotation, and enlargement • **(The year 11 foundation maths topics have links to many other subjects, find some examples below. Sciences, computer Science, Business studies computer studies, Geography home economics etc)**	Probabilities, averages, scatter graphs can be linked to careers such as: Data analyst, researchers, administrators 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		