Curriculum Map Year 9 MATHEMATICS

Topic Name	Term	**Skills** developed with link to NC Subject content	Reflection on previous link in the curriculum	Progress to future link in the curriculum
Review of Basic Number	*Autumn HT1*	• Multiplication and division with decimals • Use of Place Value in calculations • Multiplying and dividing by powers of 10 • Approximation of calculations • Order of operations • Multiples, factors, prime numbers, powers and roots • Negative numbers	*Year 7: Factors and multiples and order of operations* *Year 7: Place Value, Negative Numbers* *Year 7: Prime factor decomposition*	*Year 11: Upper and Lower Bounds*
Algebraic Manipulation	*Autumn HT1*	• Recognise expressions, equations, formulae and identities • Substitute into, manipulate and simplify algebraic expressions • Factorise an algebraic expression • Expand brackets • Quadratic expansion	*Year 7: Expressions*	*Year 10: Quadratic Equations*
Statistical Diagrams and averages	*Autumn HT2*	• Draw and interpret bar charts, pictograms, line graphs and pie charts • Work out the mode, median, mean and range of a data set • Decide which is the best average to use • Use the average and range to compare sets of data • Draw and interpret stem and leaf diagrams • Review Scatter Graphs	*Year 8: Univariate data- averages introduced.*	*Year 10: Averages from frequency tables* *Year 10: Sampling and more complex diagrams*
Linear Equations and changing the subject of a formula	*Autumn HT2*	• Solve equations with fraction, brackets and variables on both sides • Rearrange and change the subject of a formula	*Autumn 1: Algebraic Manipulation*	*Year 10: Simultaneous Equations and Inequalities*
Review of Angles. **Parallel lines, polygons and bearings.**	*Autumn HT2*	• Angle properties • Calculate angles in parallel lines • Calculate interior and exterior angles in polygons • Scale drawings and bearings	*Year 8: Angles in Polygons.*	*Year 10: Trigonometry*
Review of Fractions **Decimals and Percentages**	*Spring HT3*	• Work out one quantity as a fraction of another • Convert mixed and improper fractions • Add, subtract, multiply and divide fractions • Equivalent fractions, decimals and percentages • Calculate simple percentages • Use of percentage multipliers • Percentage increase and decrease • Percentage Change	*Year 7: Fractions* *Year 7: Introduction to Percentages*	*Year 10: Compound Interest and Reverse Percentages*
Ratio and Proportion	*Spring HT3*	• Understanding ratio • Dividing a quantity into a ratio • Direct Proportion problems • Recipes and Best Buys • Compound measures: Speed, Density, Pressure	*Year 7: Introduction to Ratio*	*Year 11: Direct and Inverse Proportion equations(Higher only)*
Review of Sequences	*Spring HT4*	• Recognise rules for sequences • Express a rule for a sequence in words and algebraically • Generate terms of a sequence given the nth term • Find the nth term of a linear sequence • Common sequences of numbers	*Year 8 Sequences*	*Year 11 Quadratic Sequences(Higher only)*

Probability	*Spring HT4*	• Calculating probabilities • Mutually exclusive and exhaustive events • Expectation • Theoretical and experimental probability • Two-way tables	*Review of Fractions, Decimals and Percentages*	*Year 11 Probability: Combined Events*
Review Area **Area of Circles**	*Summer HT5*	• Calculate the areas and perimeters of rectangles, triangles, parallelograms, trapezia and compound shapes • Review formulae for area and perimeter of circles • Areas of sectors, Arc lengths and associated problems	*Year 7 Area of 2D Shapes* *Year 8: Circles*	*Year 10: Volume*
Transformations	*Summer HT5*	• Rotational and Line Symmetry • Translate, reflect rotate and enlarge a 2D shape • Combining transformations	*Year 7 :Transforming 2D figures*	*Year 10: Similarity*
Powers and Standard Form	*Summer HT6*	• Multiply and Divide by Powers of 10 • Rules for multiplying and dividing indices • Change a number into Standard Form • Calculate using numbers in standard form	*Year 9: Review of Basic Number*	*Year 10: Powers and Surds(Higher only)*
Constructions and Loci	*Summer HT6*	• Bisect a line and an angle • Construct Perpendiculars • Define a locus and solve problems • Use isometric drawings • Plans and Elevations	*Year 8: Angles in Polygons*	*Year 10: Volume*