

Curriculum Map Year 10 GCSE MATHEMATICS: Foundation

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 Decimals and Fractions Review of Percentages	Autumn HT1	<ul style="list-style-type: none"> 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 9: Fractions, Decimals and Percentages	Year 10: Repeated Percentage Change and Reverse Percentages
Repeated Percentage Change and Reverse Percentages Direct and Inverse Proportion	Autumn HT1	<ul style="list-style-type: none"> Calculate simple interest Calculate compound interest. Solve problems involving repeated percentage change. Calculate the original amount, given the final amount, after a known percentage increase or decrease. Solve problems in which two variables have a directly proportional relationship (direct variation) Recognise graphs that show direct variation. Solve problems in which two variables have an inversely proportional relationship (inverse variation) 	Year 9: Fractions, Decimals and Percentages	Year 11: Review of Ratio
Linear Graphs	Autumn HT2	<ul style="list-style-type: none"> Drawing linear graphs. Gradient of a line. Drawing graphs by the gradient intercept method. Finding the equation of a line from its graph. The equation of a parallel line Real life uses of graphs. Solving simultaneous equations using graphs. 	Year 9: Algebraic Manipulation and Linear Equations	Year 11: Non-Linear Graphs
Review of expressions and formulae	Autumn HT2 Spring HT3	<ul style="list-style-type: none"> Recognise expressions, equations, formulae and identities Substitute into, manipulate and simplify algebraic expressions Factorise an algebraic expression Expand brackets Quadratic expansion 	Year 9: Algebraic Manipulation	Year 10: Factorising Quadratics
Factorising Quadratics	Spring HT3	<ul style="list-style-type: none"> Factorise a quadratic expression of the form $x^2 + ax + b$ into two linear brackets. 	Year 10: Review of expressions and formulae	Year 11: Non-Linear Graphs
Review of Perimeter and Area	Spring HT3	<ul style="list-style-type: none"> Calculate the areas and perimeters of rectangles, triangles, parallelograms, trapezia and compound shapes Calculate the area and perimeter of circles 	Year 9: Perimeter and Area	Year 10: Volume and Surface Area of Prisms
Volume and Surface Area of Prisms	Spring HT4	<ul style="list-style-type: none"> Use the correct terms when working with 3D shapes. Calculate the surface area and volume of a cuboid. Calculate the volume and surface area of a prism. Calculate the volume and surface area of a cylinder. 	Year 10: Review of Perimeter and Area	Year 11: Curved Shapes and Pyramids

Review of Statistical diagrams and averages	<i>Spring HT4</i>	<ul style="list-style-type: none"> • Use tally charts and frequency tables to collect and represent data. • Draw pictograms, bar charts and vertical line charts to represent statistical data. • Work out the mode, median, mean and range of small sets of data. • Decide which is the best average to use to represent a data set. 	<i>Year 9: Statistical Diagrams and Averages</i>	<i>Year 10: Statistics-Representation and Interpretation</i>
Statistics: Representation and Interpretation	<i>Summer HT5</i>	<ul style="list-style-type: none"> • Obtain a random sample from a population. • Collect unbiased and reliable data for a sample. • Draw and interpret pie charts. • Review scatter graphs and line of best fit. • Identify the modal group. • Calculate an estimate of the mean from a grouped table. 	<i>Year 9: Statistical Diagrams and Averages</i>	<i>Examination practice.</i>
Pythagoras' Theorem	<i>Summer HT5</i>	<ul style="list-style-type: none"> • Calculate the length of the hypotenuse in a right-angled triangle. • Calculate the length of a shorter side in a right-angled triangle. • Solve problems using Pythagoras' theorem. • Use Pythagoras' theorem in isosceles triangles. 	<i>Year 10: Review of Perimeter and Area</i>	<i>Year 11: Trigonometry</i>
Review Probability and Events	<i>Summer HT6</i>	<ul style="list-style-type: none"> • Calculating probabilities. • Mutually exclusive and exhaustive events. • Expectation. • Theoretical and experimental probability. 	<i>Year 9: Probability</i>	<i>Year 10: Probability of Combined Events</i>
Probability of Combined Events	<i>Summer HT6</i>	<ul style="list-style-type: none"> • Work out the probabilities when two or more events occur at the same time. • Read two-way tables and use them to work out probabilities. • Use Venn diagrams to solve probability questions. • Understand frequency tree diagrams and probability tree diagrams. • Use probability tree diagrams to work out the probabilities involved in combined events. 	<i>Year 10: Review of Probability</i>	<i>Examination practice.</i>