

Curriculum Map Year 11 MATHEMATICS Higher

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 Probability Probability of Combined Events	<i>Autumn HT1</i>	- Work out the probability of different outcomes of combined events. - Work out the probability of two outcomes or events occurring at the same time. - Use tree diagrams to work out the probability of combined events. - Use the connectors ‘and’ and ‘or’ to work out the probabilities for combined events. - Work out the probability of combined events when the probabilities change after each event. - Recap Venn Diagrams and use of formulae.	<i>Year 9: Probability</i>	<i>Year 11: Upper and Lower Bounds</i>
Circle Theorems	<i>Autumn HT1</i>	- Work out the size of angles in circles, using circle theorem properties. - Find the size of angles in cyclic quadrilaterals. - Use tangents and chords to find the size of angles in circles. - Use the alternate segment theorem to find the size of angles in circles.	<i>Year 9: Angles, Parallel Lines, Polygons and Bearings</i>	<i>Year 10: Quadratic Equations</i>
Variation	<i>Autumn HT2</i>	- Solve problems where two variables have a directly proportional relationship. - Solve problems where two variables have an inversely proportional relationship.	<i>Year 9: Ratio and Proportion Year 9: Linear Equations and changing the subject of a formula</i>	<i>Examination practice.</i>
Further Trigonometry	<i>Autumn HT2</i>	- Use trigonometric ratios and Pythagoras’ theorem to solve more complex two dimensional and three-dimensional problems. - Find the sine, cosine and tangent of any angle from 0° to 360°. - Use the sine rule and the cosine rule to find sides and angles in any triangle. - Work out the area of a triangle if you know two sides and the included angle.	<i>Year 10: Right Angled Triangles: Pythagoras’ Theorem and Trigonometry</i>	<i>Year 11: Graphs: Graphs of other functions.</i>
Graphs: Graphs of other functions and kinematic graphs	<i>Autumn HT2</i>	- Interpret distance–time graphs - Draw a graph of the depth of liquid as a container is filled. - Work out the distance travelled from a velocity–time graph. - Work out the acceleration from a velocity–time graph.. - Interpret the meaning of the area under a curve. - Draw a tangent at a point on a curve and use it to work out and interpret the gradient at a point on a curve. - Find the equation of a circle and of the tangent to a circle. - Recognise and plot cubic, exponential and reciprocal graphs. - Transformation of the graph $y = f(x)$	<i>Year 10: Quadratic Graphs</i>	<i>Examination practice.</i>
Algebraic Fractions and Functions	<i>Spring HT3</i>	- Simplify algebraic fractions - Change the subject of a formula where the subject occurs more than once. - Find the output of a function.	<i>Year 10: Algebraic Manipulation Year 10: Quadratic Equations</i>	<i>Examination practice.</i>

		- Find the inverse function. - Find the composite of two functions. - Interpret the gradient at a point on a curve. - Find an approximate solution for an equation using the process of iteration.		
Vector Geometry	<i>Spring HT3</i>	- Add and subtract vectors. - Use vectors to solve geometric problems.	<i>Year 9: Transformations</i>	<i>Examination practice.</i>
Congruence	<i>Spring HT4</i>	Demonstrate and prove that two triangles are congruent.	<i>Year 10: Similarity</i>	<i>Examination practice.</i>
Revision Examination Practice	<i>Summer HT4, HT5</i>			