Curriculum Map – Mathematics Y11 Higher

	Autumn Term				
Y11	Topic Title: Autumn Unit 1: Circle Theorems Big Question: How do I define a circle and its parts? What are circle theorems?	Topic Title: Autumn Unit 2: Probability Big Question: What are probability experiments?	Topic Title: Autumn Unit 2: Probability Big Question: How do I calculate the probabilities of combined events and use probability diagrams?	Topic Title: Autumn Unit 2: Probability Big Question: How do I calculate the probabilities of combined events and use probability diagrams?	Topic Title: Autumn Unit 2: Probability Big Question: How do I calculate the probabilities of combined events and use probability diagrams?
Links to NC	Apply and prove the standard circle theorems concerning angles, radii, tangents and chords, and use them to prove related results}	Apply the property that the probabilities of an exhaustive set of mutually exclusive events sum to one Use a probability model to predict the outcomes of future experiments; understand that empirical unbiased samples tend towards theoretical probability distributions, with increasing sample size Calculate the probability of independent and dependent combined events, including using tree diagrams and other representations, and know the underlying assumptions			
Assessments	CFU Circle theorems	CFU Probability			

Curriculum Map – Mathematics Y11 Higher

	Autumn Term			
Y11	**Topic Title:** Autumn Unit 3: Sequences **Big Question:** How do I generate terms from a given rule?	**Topic Title:** Autumn Unit 3: Sequences **Big Question:** How do I recognise special sequences?	**Topic Title:** Autumn Unit 4: Straight line graphs Autumn Unit 5: Real world graphs **Big Question:** How do I interpret graphs in real world context? What does the area under graphs show on time graphs?	**Topic Title:** Autumn Unit 6: Non linear graphs **Big Question:** What do graphs of equations and functions look like?
Links to NC	Use a given rule to generate terms.	Recognise and use sequences of triangular, square and cube numbers, simple arithmetic progressions	Calculate or estimate gradients of graphs. Introduce the concepts of average and instantaneous rate of change (gradients of chords or tangents) in numerical, algebraic and graphical contexts. Calculate or estimate areas under graphs and interpret in the context of distance-time graphs and velocity-time graphs. Calculate or estimate gradients of graphs, and interpret in kinematic contexts using distance-time graphs, velocity-time graphs and financial graphs. Apply the concepts of average and instantaneous rate of change (gradients of chords or tangents) in numerical, algebraic and graphical contexts.	Recognise and sketch the graphs of trig functions $y=\sin\theta$, $y=\cos\theta$, $y=\tan\theta$. Recognise and use the equation of a circle with centre at the origin. E.g. $x^2 + y^2 = r^2$ Calculate the equation of a line representing a radius or diameter of a point on the circumference of a circle. Calculate the equation of a tangent to a circle at a given point.
Assessments	CFU Generating terms when given a rule		CFU Velocity/time graphs	**Revision for amended Mock session 1. Students will have a revision list and tasks set on maths watch.**

Curriculum Map – Mathematics Y11 Higher

	Spring Term				
Y11	Topic Title: Spring Unit 1: Transformations Big Question: What are plane isometric transformations?	Topic Title: Spring unit 2: Similar shapes Big Question: What does similarity mean? What are plane isometric transformations?	Topic Title: Spring unit 3: Transformation of Functions Big Question: What is language of functions? How do I complete transformations a given graph or the graph of a given equation?	Topic Title: Spring Unit 4: Vectors Big Question: What is plane vector geometry?	**Revision for final exams Gap analysis from mock session 2 and reteach.**
Links to NC	Perform and describe a sequence of isometric transformations (reflections, rotations or translations), on a simple shape. Describe the resulting transformation and the changes and invariance achieved.	Compare lengths, areas and volumes using ratio notation and/or scale factors; make links to similarity (including trigonometric ratios)	Sketch translations and reflections of the graph of a given function.	Apply addition and subtraction of vectors, multiplication of vectors by a scalar, and diagrammatic and column representations of vectors	
Assessments	**Summer Term** **QLA from in class revision papers and materials. Reteach and feedback leading to final Exams.**				