



Year 11 Maths Curriculum Map

Overview	The GCSE course is completed in Year 11, followed by time assigned to review, reflect, revise and strengthen. The higher and foundation tier schemes of work are continued below – knowledge required only on the higher tier are emboldened. Foundation learners also continue exploring topics from Year 10.	
Year 11	Autumn 1 & 2	Spring 1 & 2
Topic	Unit 16: Circle theorems Unit 17: More algebra	Unit 18: Vectors Unit 19: Proportion & graphs Revision and exam preparation
Knowledge	<p>Our learners can:</p> <p>Solve problems involving angles, triangles and circles.</p> <p>Solve problems involving chords and radii.</p> <p>Understand and use facts about tangents at a point and from a point.</p> <p>Understand and prove facts about angles subtended at the centre and the circumference of circles.</p> <p>Understand, prove and use facts about the angle in a semicircle being a right angle.</p> <p>Understand, prove and use facts about angles subtended at the circumference of a circle.</p> <p>Understand, prove and use facts about cyclic quadrilaterals.</p> <p>Prove and use the alternate segment theorem.</p> <p>Give reasons for angle sizes using mathematical language.</p> <p>Find the equation of the tangent to a circle at a given point.</p> <p>Sketch a circle from its equation and state the equation of a circle about the origin.</p> <p>Change the subject of a formula where the power of the subject appears.</p> <p>Change the subject of a formula where the subject appears twice.</p> <p>Add and subtract, multiply and divide algebraic fractions.</p> <p>Change the subject of a formula involving fractions where all the</p>	<p>Our learners can:</p> <p>Understand and use vector notation.</p> <p>Work out the magnitude of a vector.</p> <p>Calculate using vectors and represent the solutions graphically.</p> <p>Calculate the resultant of two vectors.</p> <p>Solve problems using vectors.</p> <p>Prove lines are parallel.</p> <p>Prove points are collinear.</p> <p>Write and use equations to solve problems involving direct proportion.</p> <p>Solve problems involving square and cubic proportionality.</p> <p>Write and use equations to solve problems involving inverse proportion.</p> <p>Use and recognise graphs showing inverse proportion.</p> <p>Recognise and sketch graphs of exponential functions.</p> <p>Calculate the gradient of a tangent at a point.</p> <p>Estimate the area under a non-linear graph.</p> <p>Understand the relationship between translating a graph and the change in its function notation.</p> <p>Understand the effect stretching a curve parallel to one of the axes has on its function form.</p> <p>Understand the effect reflecting a curve in one of the axes has on its function form.</p>

	<p>variables are in the denominators.</p> <p>Simplify algebraic fractions.</p> <p>Simplify and expand expressions involving surds.</p> <p>Rationalise the denominator of a fraction.</p> <p>Solve equations that involve algebraic fractions.</p> <p>Use function notation.</p> <p>Find composite functions.</p> <p>Find inverse functions.</p> <p>Prove a result using algebra.</p>	
Skills	<p>Students will combine their acquired subject knowledge, problem solving capabilities and examination experience to enable them to prepare for the assessments ahead. They will continue to utilise HegartyMaths for diagnostic purposes to assist revision.</p>	