

**Learning Programme – Mathematics – 2<sup>nd</sup> Year**

<b>Topic/ Content</b>	<b>Objectives/Skills</b>	<b>Homework</b>	<b>Assessment</b>	<b>Success Criteria (for E/S/D at KS3)</b>	<b>Stretch &amp; Challenge (Thirst for Learning)</b>
	<b>Trinity Term</b>				
Algebra 2	Reduce a given linear equation in two variables to the standard form $y = mx + c$ ; calculate and interpret gradients and intercepts of graphs of such linear equations numerically, graphically and algebraically.	Students will be set regular homework that is either teacher marked, peer marked, self-marked or computer marked.	End of Year Exam (close to May Half-Term), on all topics covered up to that point.  Two to three teacher marked pieces of homework will be set each half-term.	Mainly determined from End of Year Exam, however, Half-Term tests, class work & homework may also be used.  Grade boundaries for E, S & D dependent on overall scores across the year group.	Students will be challenged using extension questions on the topics they are studying, designed to further develop their ability to solve multi-staged problems.
	Recognise, sketch and produce graphs of linear and quadratic functions of one variable with appropriate scaling, using equations in $x$ and $y$ and the Cartesian plane.  Interpret mathematical relationships both algebraically and graphically.				
	Use linear and quadratic graphs to estimate values of $y$ for given values of $x$ and vice versa.				
Shape 2	Recognise congruent and similar shapes. Know and use the criteria for congruence and similarity of triangles. Use scale factors, scale diagrams and maps. Interpret scale drawings.				
	Apply angle facts, triangle congruence, similarity and properties of quadrilaterals to derive results about angles and sides, including Pythagoras' Theorem, and use known results to obtain simple proofs.				
	Use compound units such as speed, unit pricing and density to solve problems.				