Year 2 Enriched Mathematics Course Outline

	Content
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Term 1	
1	**Factorization of Algebraic Expressions**
1.1	Expansion (Revision)
1.2	Common factor method
1.3	Grouping method
1.4	Special Algebraic rules
1.5	Quadratic Factorization
2	**Algebraic Fractions**
2.1	Simplifying algebraic fractions
2.2	Multiplication and Division of algebraic fractions
2.3	Addition and subtraction of algebraic fractions
2.4	Solving simple equations involving algebraic fractions
2.5	Changing subject of formula
3	**Indices and Standard Form**
3.1	Definition of index notation
3.2	Using laws of indices to simplify algebraic expressions
3.3	Solving equations involving indices
3.4	Definition of Standard Form
3.5	Operations on numbers expressed in Standard Form
Term 2	
4	**Simple Inequalities & Simultaneous Linear Equations**
4.1	Solving simple inequalities
4.2	Meaning of Simultaneous Equations
4.3	Solving Simultaneous Equations using Elimination Method Substitution Method Graphical Method
4.4	Solving problems using simultaneous equations
5	**Quadratic Equations**
5.1	Meaning of quadratic equations
5.2	Solving quadratic equations using 'rooting' method; factorization method; completing the square and quadratic formula method
5.3	Application of Quadratic Equations
Term 3	
6	**Graphs of Quadratic Functions**
6.1	Drawing of quadratic graphs and answering of questions based on graph drawn
6.2	Quadratic graphs and applications
7	**Pythagoras Theorem**

7.1	Pythagoras Theorem
7.2	Applications of Pythagoras Theorem (including questions on volume and surface area of pyramid, cone and sphere)
7.3	Determination of right-angled triangles using converse of Pythagoras Theorem
8	**Mensuration**
8.1	Volume and surface area of a pyramid
8.2	Volume and surface area of a cone
8.3	Volume and surface area of a sphere
9	**Trigonometric Ratios**
9.1	Definition of sine, cosine and tangent of an acute angle
9.2	Trigonometric Ratios and application
Term 4	
10	**Symmetry**
10.1	Line Symmetry
10.2	Rotational Symmetry and order