YISHUN SECONDARY SCHOOL
ADDITIONAL MATHEMATICS
SECONDARY 3 EXPRESS 2020

Mathematics Curriculum		**Key Programmes**
In line with the requirements of the A Mathematics Syllabus, the teaching of A Math at YSS focuses on developing thinking, reasoning and problem-solving skills using Math Modelling, investigation, making conjectures, proofs and making connections among mathematical concepts.		
Term 1	**Learning Experiences (chapter, activity)**	**Learning Outcomes & Assessment**
Week 0	--	
Week 1	3.1 Surds 3.2 Simplifying expressions involving surds	Use of SLS
Week 2	3.3 Solving equations involving surds	
Week 3	2.3 Solving linear and non-linear simultaneous equations 1.1 Quadratic functions of the form $y = a(x - p)(x - q)$ 1.2 Quadratic functions of the form $y = a(x - h)^2 + k$	Use of Desmos
Week 4 (CNY-Mon, Tue)	1.3 Conditions for quadratic curve to lie completely above or below x-axis 1.4 Quadratic functions in real-world contexts	Use of Desmos
Week 5	2.1 Solving quadratic equations by completing the square 2.2 Solving quadratic equations using the Quadratic formula	Use of Desmos
Week 6	2.4 Solving quadratic inequalities	Use of Desmos
Week 7	4.1 Polynomials	
Week 8	4.2 Remainder and Factor Theorem	
Week 9	4.3 Cubic expressions, equations and identities	
Week 10	4.4 Partial Fractions	WA1 (50 min) Chapter 1 to 3
March Holiday Assignment		
Term 2	**Learning Experiences (chapter, activity)**	**Learning Outcomes & Assessment**
Week 1	5.1 The Binomial Expansion of $(1 + b)^n$ 5.2 The Binomial Expansion of $(a + b)^n$	SLS

Week 2	5.3 Applications of Binomial Theorem in real-world contexts	
Week 3 (Good Fri-Fri)	6.1 Exponential expressions and equations 6.2 Introduction to Logarithms	
Week 4	6.3 Laws of Logarithms and change of base formula	
Week 5	6.4 Logarithmic and Exponential equations	
Week 6 (Labour Day-Fri)	6.5 Exponential and Logarithmic Functions and graphs 6.6 Applications of Exponential and Logarithmic Functions	SLS
Week 7 (Vesak Day-Thurs)	7.1 Mid-point of a Line Segment 7.2 Parallel and perpendicular lines 7.3 Equation of straight line	Exploration through Reasoning
Week 8	7.4 Areas of rectilinear figures	
Week 9	7.5 Equations of Circles	WA2 (50 min) Chapter 4 to 6
Week 10 (Hari Raya Puasa-Mon)	Elective Modules	
	June Assignment	
Term 3	**Learning Experiences (chapter, activity)**	**Learning Outcomes & Assessment**
Week 1	7.5 Equations of Circles	SLS
Week 2 (Youth Day, Mon)	8.1 Why study Linear Law 8.2 Converting non-linear equation into linear form 8.3 Converting linear equation into non-linear form	
Week 3	8.4 Applications of Linear Law	
Week 4	9.1 Trigonometric Ratios of acute angles and special angles 9.2 Trigonometric Ratios of general angles	
Week 5 (Hari Raya Haji-Fri)	9.3 Trigonometric functions and graphs	Use of Desmo
Week 6	10.1 Trigonometric equations 10.2 Trigonometric identities	
Week 7	10.3 Addition Formulae	

(National Day-Mon)		
Week 8	10.4 Double Angle Formulae	
Week 9	10.4 Double Angle Formulae 10.5 Proving of identities	WA3 (50 min) Chapter 7 to 9
Week 10 (Teachers' Day Celebration-Thurs, Teachers' Day-Fri)	10.6 R-Formula	
September Holiday Assignment		
Term 4	**Learning Experiences (chapter, activity)**	**Learning Outcomes & Assessment**
Week 1	**Revision**	
Week 2	**Revision** **Advance Paper (Thu)**	
Week 3 -5	**End of Year Examination and Script Checking**	
Week 6	**Headstart Programme**	