

## MATHS CURRICULUM INTENT

'Mathematics is a creative and inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems.'(National Curriculum, 2013).

The aim of our mathematics curriculum at MECE is to help all students develop the skills to solve problems not only to pass GCSE examinations but also to equip them for the next stage of their learning and a life that will be enriched through a firm understanding of mathematics. We support them in becoming fluent in the fundamentals of mathematics so that they are able to recall key knowledge and use algorithms and procedures flexibly to provide efficient solutions to increasingly complex problems. We expect students to be able to talk about the mathematics they are learning and reason about mathematical concepts. In order to achieve these ambitious aims, students work on a range of rich tasks from investigations to practical explorations as well as practice exercises and exam questions. Assessments are used to inform planning and ensure that no student falls behind.

MECE KS4 3 YEAR HIGHER SCHEMES OF WORK OVERVIEW													
Year 9					Year 10					Year 11			
Term	Unit	Title	Hours		Term	Unit	Title	Hours		Term 1	Unit	Title	Hours
Autumn 1	1	Powers, Decimals, HCF and LCM, Positive and negative, roots, rounding, reciprocals, standard form, indices and surds			Autumn 1	6b/c	Linear Graphs and Coordinate Geometry/Quadratic cubic and other graphs			Autumn 1	14a	Collecting data	
Autumn 2	2	Expressions, substituting into simple formulae, expanding and factorising equations, sequences and simple proof				7a	Perimeter, area and circles				14b	Cumulative frequency , boxplots and histograms	
	5b Part 1	Pythagoras			Autumn 2	7b/c	3D Forms and volume, cylinders, cones and Spheres/accuracy and bounds				15	Further quadratics	
ASSESSMENT WEEK AND FEEDBACK PPE 1						unit 8	Transformation; constructions: triangles, nets, plan and elevations, loci, scale drawings and bearings			Autumn 2	17	Changing the subject of the formulae	
Spring 1	3a	Averages and Range			ASSESSMENT WEEK AND FEEDBACK 1						18	Vectors and Geometric Proof	
	3b	Representing and interpreting data											
Spring 2	3c	Scatter graphs			Spring 1	8	Transformation; constructions: triangles, nets, plan and elevations, loci, scale drawings and bearings			Spring 1	19	Reciprocal and exponential graphs/direct and indirect proportion	
	4a/b	Fractions, Percentages, ratio and proportion											
			3d Pythagoras								ASSESSMENT WEEK AND FEEDBACK PPE 1		
ASSESSMENT WEEK AND FEEDBACK PPE 2					Spring 1	9a	Solving Quadratics and Simultaneous Equations			Spring 1		Revision	
Summer 1	4c	Ratio and Proportion				9b	Inequalities						
Summer 2	5	Angles, Polygons, Parallel Lines; Right-angled Triangles: Pythagoras and Trigonometry			Spring 2	9b	9b Inequalities			Spring 2		Revision	
	6a	Real Life Graphs				16a	Circle Theorems				ASSESSMENT WEEK AND FEEDBACK PPE 2		
						16b	Circle Geometry						
ASSESSMENT WEEK AND FEEDBACK PPE 3					ASSESSMENT WEEK AND FEEDBACK PPE 2								
					Summer 1	16b	Circle Geometry						
						10	Probability						
						11	Multiplicative Reasoning						
						12	Similarity and Congruence						
					Summer 2	12	Similarity and Congruence						
						13	Graphs of Trigonometric functions / Further Trigonometry						
ASSESSMENT WEEK AND FEEDBACK PPE 3					ASSESSMENT WEEK AND FEEDBACK PPE 3								