Mathematics Scheme of Learning

<u>Year 11 – Term 4</u>

Intent – Rationale

"Maths is for everyone". AQA GCSE Mathematics is designed to be diverse, engaging and essential to equip all students with the skills and knowledge to reach their future destination. Opportunities to make connections, generalise and apply are embedded where appropriate for each individual student. References to careers and future learning and shared with students.

Sequencing – what prior learning does this topic build upon?	Sequencing – what subsequent learning does this topic feed into?
 Year 10 Term 3 Real life graphs 	A level Integration and mechanics
 Year 10 Term 1 expressions & equations, quadratics 	A level exponential modelling
 Year 10 Term 4 Functions, Term 3 sketching graphs 	
 Year 10 Term 2 Percentages, Year 11 Term 1 iterative 	
processes	
What are the links with other subjects in the curriculum?	What are the links to SMSC, British Values and Careers?
 Physics with Pre Calculus Geography with growth and decay Art Graphics, with construction & loci 	 Use the coded help guides to complete this section
What are the opportunities for developing literacy skills and developing learner confidence and enjoyment in reading?	What are the opportunities for developing mathematical skills?
 Please fill this in with your own suggestions alternatively the LRC team will provide some suggested titles/links 	Pre calculus in preparation for Alevel and kinematic links to Physics. Financial maths link in growth and decay.

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Intent – Concepts

What knowledge will students gain and what skills will they develop as a consequence of this topic?					
Know					
From a velocity-time graph calculate the distance travelled.					
Construct a perpendicular bisector of a line. Construct an angle bisector. Construct a 60 degree angle.					
Apply					
Interpret graphs in distance-time, ve	Interpret graphs in distance-time, velocity-time and financial contexts.				
From a velocity time graph ca	lculate the distance travelled				
Solve loci problems, including equidistant fro	om a point, from two points and from a line				
Extend					
Construct a perpendi	icular line to a point.				
What subject specific language will be used and developed in	What opportunities are available for assessing the progress of				
this topic?	students?				

 Rate of change, rate, depreciate, interest, annual, investment, decay, growth, compound, simple, iterative, 	 End of topic homework tests Exam question practice – open book Mini quizzes including Kahoot 		
	 Recall starters: LLLWLTLY Corbett 5 a day Whiterose maths KS4 problem of the day Mini quiz on last term topics 		

Gradients	R	А	G
Interpret the gradient of a straight line as the rate of change			
From a graph find the instantaneous rate of change			
From a graph find the average rate of chance			

Pre-calculus	R	А	G
Interpret graphs in distance-time, velocity-time and financial contexts			
From a velocity time graph calculate the distance travelled			

Constructions and Loci	R	А	G
Construct perpendicular bisector			
Construct perpendicular from a line to a point of vica versa			
Bisect a given angle			

Construct a 60° angle		
Solve loci problems, including equidistant from a point, from two points and from a line		

Intent – Concepts

Lesson title	Learning challenge	Higher level challenge	Suggested activities and resources
Gradients	Interpret the gradient of a straight	From a graph find the	РР
	line as the rate of change	instantaneous rate of change.	
		From a graph find the average rate	
		of chance.	
Pre Calculus	Interpret graphs in distance-time,	From a velocity time graph	РР
	velocity-time and financial contexts	calculate the distance travelled	
Construction & Loci	Construct perpendicular bisector	Construct perpendicular from a line	РР
	Bisect a given angle	to a point of vica versa.	
	Construct a 60° angle	Solve loci problems, including	
		equidistant from a point, from two	
		points and from a line	