Longfield Learning Journey

Key Stage 4 HIGHER	Unit of work: Pythagoras, Trigonometry and Vectors			
Key Words:	**Prerequisites Green core – Blue extend**	**R**	**A**	**G**
hypotenuse, opposite, adjacent, SOHCAHTOA, vector, column vector	Calculate squares and square roots.			
	Rearrange equations to change the subject.			
	Substitute numerical values into expressions			

	Content: Pythagoras, Trigonometry and Vectors	R	A	G
G20	Know and apply Pythagoras' theorem to find lengths in right-angle triangles.			
G20	Know the the trigonometric ratios, sinΘ=opposite/hypotenuse, cosΘ=adjacent/hypotenuse, tanΘ=opposite/adjacent			
G20	Apply the trigonometric ratios to find lengths in right-angle triangles.			
G20	Apply the trigonometric ratios to find angles in right-angle triangles.			
G21	Know the exact values of sinΘ and cosΘ for $\Theta=0^o$, 30^o, 45^o, 60^o and 90^o; know the exact value of tan ^{o} for 0^o, 30^o, 45^o, 60^o.			
G22	Know and apply the sine rule to find unknown lengths and angles.			
G22	Know and apply the cosine rule to find unknown lengths and angles.			
G22	Apply Pythagoras' theorem, the trigonometric ratios and the sine and cosine rule to find angles and lengths in 2D figures.			
G22	Apply Pythagoras' theorem, the trigonometric ratios and the sine and cosine rule to find angles and lengths in 3D figures.			
G25	Apply addition and subtraction of vectors.			
G25	Apply multiplication of vectors by a scalar.			
G25	Apply diagrammatic and column representations of vectors.			
G25	Use vectors to construct geometric arguments and proofs.			

K	W	L
What you know	*What you want to know*	*What have you learned*