The Sutton Academy

Knowledge Rich Curriculum Plan

Course/Unit

Lesson/Learning Sequence	Intended Knowledge: *Students will know that…*	Tiered Vocabulary	Prior Knowledge: *In order to know this students, need to already know that…*	Assessment
To learn how to use vectors in 3D and To learn how to solve geometric problems involving vectors.	• *Students will know what unit vectors are* • *Students will know how to use vector arithmetic c in 3D* • *Students will know how o find the magnitude of a vector in 3D* • *Students will know how to find the angle between vectors in 3D* • *Students will know how to solve geometric problems in 3D*		Students will need to know how to use formula Students will need to have a knowledge of differentiation Students will need to know trigonometric identities.	

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Students will know how to use the trapezium rule to approximate integration.	• Students will know that if you cannot integrate a function algebraically, you can use a numerical method to approximate the area beneath a curve. • Students will know that to approximate the area given by $\int_a^b ydx$ you can divide the area into n equal strips. Each strip will be of width h where $h = \frac{b-a}{n}$ • Students will know that $\int_a^b ydx \approx \frac{1}{2}h(y_0 + 2(y_1 + y_2 \dots + y_{n-1}) + y_n)$ where $h = \frac{b-a}{n}$ and $y_i = f(a + ih)$ • Students will know if there answer is an overestimate (convex) or underestimate.		Students will need to know the area of a trapezium. Students will need to know how to substitute into a formula Students will need to know how to use radians.	