The Sutton Academy

Knowledge Rich Curriculum Plan

Year 11 Higher+ Geometry 1

Lesson/Learning Sequence	Intended Knowledge: *Students will know that…*	Tiered Vocabulary	Steps to Success	Prior Knowledge: *In order to know this…*	Feedback
To learn how to represent and interpret column vectors Boost or starter topic	• Students will know how to represent a column vector on a coordinate grid • Students will know how to write a column vector given one drawn on a coordinate grid • Students will know that a negative vector has the same magnitude but the opposite direction. • Students will know how to calculate the magnitude of a vector using Pythagoras' theorem • Students will know how to combine column vectors by adding or subtracting them and draw resulting vectors • Students will know how to multiply column vectors by a scalar	**Vector –** A vector describes a movement from one point to another. A vector quantity has both direction and magnitude. **Magnitude –** size	•	• Students will need to know how to use Pythagoras' theorem to calculate the hypotenuse of a right-angled triangle	
To learn how to solve geometrical problems involving vectors	• Students will know how to describe a movement between two points on a shape using vectors • Students will know that any vector going in the same direction and the same magnitude is equal • Students will know how to find vectors where lines are divided into two halves by a midpoint • Students will know how to find vectors where lines are divided into a ratio		•	• Students need to know how to write ratio as a fraction	
To learn how to solve geometrical problems involving vectors	• Students will know how to describe a movement between two points on a shape using vectors • Students will know that any vector going in the same direction and the same magnitude is equal • Students will know how to find vectors where lines are divided into two halves by a midpoint • Students will know how to find vectors where lines are divided into a ratio		•	• Students need to know how to write ratio as a fraction	
To learn how to form vector proofs	• Students will know how to prove two vectors are parallel. Students will know that parallel vectors are multiples of each other. • Students will know how to prove two vectors are on a straight line. Students will know that for vectors to fall on a straight line they must be parallel and share a point in common.	**Parallel –** parallel lines are two lines that are side by side and have the same distance continuously between them **Multiple –** a number that is in a given numbers multiplication tables	•	• Students should already know how to find vectors describing a movement from one point on a shape to another	

Lesson/Learning Sequence	Intended Knowledge: *Students will know that…*	Tiered Vocabulary	Steps to Success	Prior Knowledge: *In order to know this…*	Feedback
To learn how to solve more complex problems involving vectors	• Students will know how to solve more complex problems involving vectors, including those where they have to work out scalars		•	• Students should already know how to find vectors describing a movement from one point on a shape to another	