



The Sutton Academy

Knowledge Rich Curriculum Plan

Course/Unit



Lesson/Learning Sequence	Intended Knowledge: <i>Students will know that...</i>	Tiered Vocabulary	Prior Knowledge: <i>In order to know this students, need to already know that...</i>	Assessment
To learn how to find resultant moments.	<ul style="list-style-type: none"> • <i>Students will know that the sum of the moments acting on a body is called the resultant force.</i> • <i>Students will know when you have several coplanar forces acting on a body, you can determine the turning effect.</i> • <i>Students will know how to use trig to find resultant forces</i> 		Students will need to know basic trig. Students will need to know how to find forces from connected particles	
To learn how to find resultant forces when a body is in equilibrium	<ul style="list-style-type: none"> • Students will know that when a rigid body is in equilibrium, the resultant force in any direction is 0N and the resultant moment about any point is 0N m • Students will know how to resolve forces vertically. • Students will know that the total upwards force = total downwards force. • Students will know to find missing forces using equilibrium facts. 		Students will need to know how to use moments.	
To learn how to use the resolve forces when the rod is non-uniform	<ul style="list-style-type: none"> • Students will be able to find the centre of mass from a non-uniform rod. • Students will be able to use moments to find centres of mass, • Students will be able to solve problems using the centre of mass. 		Students will need to know how to use moments.	
To learn how to solve problems involving rods that are on the point of tilting.	<ul style="list-style-type: none"> • Students will know that when a rigid body is on the point of tilting about a pivot, the reaction at any other support is zero. • Students will be able to solve problems to find mass on rods that are on the point of tilting. • Students will be able to find missing forces on rods that are on the point of tilting. 		Students will need to know how to use moments.	

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