



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 resolve forces	<ul style="list-style-type: none"> • <i>Students will know that if a force is applied at an angle to the direction to the direction of motion, you can resolve it to find the component of the force that acts in the direction of motion.</i> • <i>Students will know that the component of a force of magnitude F in a certain direction is $F\cos X$ where X is the size of the angle between the force and direction.</i> • <i>Students will know how to solve problems where the force needs to be resolved.</i> 		Students will need to know basic trig. Students will need to know $F=MA$	
To learn how to solve problems involving inclined planes.	<ul style="list-style-type: none"> • Students will know that to solve problems involving inclined planes it is usually to easier to resolve parallel and at right angles to the plane. • Students will know how resolve forces vertically and horizontally. • Students will find forces on an inclined plane. • Students will know how to find acceleration on a inclined plane. 		Students will need to know to resolve forces. Students will need to know $F=ma$ Students will need to know basic trig	
To learn how to solve problems involving friction.	<ul style="list-style-type: none"> • Students will know that friction opposes motion. • Students will know that the limiting value of friction between two surfaces F_{max} is given by $F_{max}=uR$, where U is the coefficient of friction and R is the normal reaction between the two surfaces. • Students will know how to find the magnitude of a frictional force. • Students will know how to find the acceleration of a particle involving friction. 		Students will need to know to resolve forces. Students will need to know $F=ma$ Students will need to know basic trig	