

Calculus: Find the velocity and acceleration of a particle moving in a straight line.

Grade: Post-Secondary

Overview	The students will discover a real-life situation pertinent to finding the velocity and acceleration of a particle in a straight line. They will learn to use freescreencast.com in order to share what they have discovered to their classmates.
Objective	The students will be able to identify how a situation in which why and how to find the speed of a particle in a straight line. They will be able to correctly identify each step of the problem given a picture or video and the screen cast application. Finally, they will be able to present their findings to the class in a visual presentation.
Standards	IN C.3.11 Find the velocity and acceleration of a particle moving in a straight line.
Materials	The materials needed for this lesson are: <ul style="list-style-type: none">• Camera/video camera• Calculus textbook• Computer with Freescreencast.com software and applications• Projector and computer for classroom display of presentation
Procedure	<ol style="list-style-type: none">1. Assign each student to a group of 4 or 5.2. The students will contact a business which uses the method of figuring out the acceleration and velocity of particles in its every day conduction of business.3. The students will record process at work on camera and explain what they are capturing on video.4. The students will create a video/ still presentation, explaining the steps of finding the velocity and acceleration using the Freescreencast.com.5. The students will present their presentation to the class.
Evaluation	<p>The students will be graded out of a hundred points.</p> <ul style="list-style-type: none">• 50 points for content of presentation.• 20 points for creativeness and overall appeal of the presentation.• 20 points for group evaluation.• 10 points individual evaluation. <p>Through peer and group evaluation the students learn from their own classmates and also pay attention to other groups presentation. This project will also replace a large midterm grade.</p>