

Unit Learning Targets

Department: Science

Course: Physics/Physics with Technology

Instructor: Jessica Rodriguez

Standard I: The student will understand how to measure, calculate, and describe the motion of an object in terms of position, velocity, and acceleration (Unit 2A: Constant Velocity, 2B: Accelerated Motion).

Student-Friendly Learning Target Statements

Know	Knowledge Targets <i>"What I need to know"</i>	I know the difference between distance and displacement.
		I know the difference between speed, instantaneous velocity, and average velocity.
		I know that the slope of a position vs. time graph represents the velocity.
		I know that the slope of a velocity vs. time graph represents the acceleration.
		I know that the area underneath a velocity vs. time graph can be used to find the displacement.
		I know that all objects undergoing free fall are accelerated at a constant rate.

Do	Reasoning Targets <i>"What I can do with what I know."</i>	<p>I can describe the motion of an object by using motion maps, position vs. time graphs, velocity versus time graphs, and acceleration versus time graphs.</p> <p>I can determine whether an object is undergoing constant velocity or accelerated motion.</p>
	Skill Targets <i>"What I can demonstrate."</i>	<p>I can use and rearrange equations to solve for the instantaneous velocity, displacement, time, or acceleration of an object.</p> <p>I can find the acceleration, instantaneous velocity, and displacement using position vs. time graphs, velocity vs. time graphs, and acceleration vs. time graphs.</p>
	Product Targets <i>"What I can make to show my learning."</i>	<p>I can create motion maps to describe an object's motion.</p> <p>I can create position vs. time graphs to describe an object's motion.</p> <p>I can create velocity vs. time graphs to describe an object's motion.</p> <p>I can create acceleration vs. time graphs to describe an object's motion.</p> <p>I can create a coherent lab report for experiments on constant velocity and accelerated motion that can be duplicated.</p>

Essential Learning: The critical knowledge, skills, and dispositions each student must acquire as a result of this unit of instruction.

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