

Lesson Plan Template

Date: 10/16/20

<p>Grade: High School</p> <p>Materials:</p> <p>Instructional Strategies:</p> <ul style="list-style-type: none"> € Direct instruction € Guided practice € Socratic Seminar € Learning Centers € Lecture € Technology integration € Other (list) 	<p>Subject: Physics</p> <p>Technology Needed: projector, computer/iPad</p> <p>Guided Practices and Concrete Application:</p> <ul style="list-style-type: none"> € Large group activity € Independent activity € Pairing/collaboration € Simulations/Scenarios € Other (list) <p>Explain:</p>
<p>Standard(s)</p> <p>HS-PS2-1: Analyze data to support the claim that Newton’s second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.</p>	<p>Differentiation</p> <p>Below Proficiency: Spend more time with them during the homework portion to guide them into solving the problems.</p> <p>Above Proficiency: Have them explain concepts or how to solve the problems to another student who might be struggling just a bit.</p> <p>Approaching/Emerging Proficiency:</p> <p>Modalities/Learning Preferences:</p>
<p>Objective(s)</p> <p>Students will be able to define projectile motion. Students will be able to show the trajectory of a projectile. Students will be able to construct a mathematics representation of a projectile.</p> <p>Bloom’s Taxonomy Cognitive Level: Remembering, understanding, creating</p>	<p>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)</p> <p>Students are expected to behave with respect and to listen when others are talking.</p>
<p>Classroom Management- (grouping(s), movement/transitions, etc.)</p> <p>Students will come into the classroom at their assigned desks. Once the main part of lecture starts, they will take out their notes and take notes on the content.</p>	<p>Classroom Management- (grouping(s), movement/transitions, etc.)</p> <p>Students will come into the classroom at their assigned desks. Once the main part of lecture starts, they will take out their notes and take notes on the content.</p>
Minutes	Procedures
	<p>Set-up/Prep: I will need to connect my computer to the projector in order to be able to display my PowerPoint.</p>
	<p>Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)</p> <p>Once the students walk in the door, Angry Birds the game will be displayed on the projector. The class will then play a few rounds of angry birds. After a few rounds have been played I will bring them back and ask them what was happening in the game. I will try to get their own understanding of projectile motion.</p> <p>I then will tell them to take out their notes because we are going to go over concepts that they are going to want to remember for their future assignments and test at the end of the unit.</p>
	<p>Explain: (concepts, procedures, vocabulary, etc.)</p> <p>Intro: I will start off by asking their understanding of vectors and how to use vectors to solve equations for triangles, etc. I then will go into explanation of what is projectile motion/trajectory and understanding the basic definitions. Then will move on to show them how to mathematically represent projectile motion.</p> <p>We will do some basic problems that they might feel comfortable with as a way to ease into projectile motion. We will solve together the ramp problems by solving for the acceleration down the ramp and the velocity of the ball as it reached the end of the ramp. Then I will move onto a free-falling scenario to get into the problems of projectile motion. I will first identify that the horizontal velocities and vertical velocities are independent of one another and by using this I will further show them how to solve projectile motion. We will do the ball falling off the cliff scenario and have them be able to find the time it takes the ball to fall to the ground and to be able to find the distance from the cliff that the ball lands at.</p>

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	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <p>They will further explore these concepts in their homework as they are solving for similar problems that we solved together on the board. During this time, they are allowed to work together to come to conclusions together and ask clarification questions.</p>
	<p>Review (wrap up and transition to next activity):</p> <p>The reviewing of this activity will be reflected in their homework and over the next days of this unit.</p>
<p>Formative Assessment: (linked to objectives, during learning)</p> <ul style="list-style-type: none">● Progress monitoring throughout lesson (how can you document your student's learning?) <p>I will be asking for a thumbs up if they understand and a thumbs down if they need some other assistance. I also have time allotted to start working on the homework before they leave class that way they can ask questions and have help if needed.</p>	<p>Summative Assessment (linked back to objectives, END of learning)</p>
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?):</p> <p>I think the last few times I taught went way better than the first time. The first time the technology was not working properly, and I was more nervous. But I got more comfortable as time went on and was able to adjust to the students better and spend more time doing something that they might have trouble understanding and moving quicker on the easier concepts. I think I would create a scenario to solve for an angry birds' flight. I think that would have completed the angry bird circle and be able to show how this content is relatable.</p>	