

Shelton High School – Physics I
Midterm Assessment
Sports/Activity Video Physics Voice Over

Project Requirements

OBJECTIVE: A public broadcasting company has decided that it wants to televise a variety of sporting events and wants these programs to be educational as well as entertaining. The company wants people to understand that the laws of physics deal not only with the things that happen in the laboratory, but also with everyday events in the real world.

You are to provide the voice-over narration for a sports video or video of an extracurricular activity, like sports commentators do during a sporting event.

The narration will need to explain the physics of the action appearing on the screen. You will do a “science commentary” on a sports clip or a series of related clips, in order to give the TV viewer a different perspective that might provide a new outlook on sporting events. Since the intention is to provide the viewer with interesting analysis of the physics of sports, the voice-over should include physics terms and physics principles, while being entertaining and lively.

Requirements:

- You will apply concepts covered in Physics I. Concepts must be relevant to the action/activity in the video. You should include topics/concepts we have covered since the beginning of the school year. These concepts include, but are not limited to, Kinematics (Motion); Dynamics (Forces); Work, Energy and Energy Conservation. Specifically, you should:
 - **Explain how energy is transformed from one form to another.**
 - **Identify and relate the activity to scientific laws**
 - **Educate your audience about different forms of energy, demonstrating and describing how they are evident in the sport/activity.**
 - **Describe how energy is conserved within the system, and how the parameters of the system are defined.**
 - **Use physics terms such as displacement, velocity, time, acceleration, force, mass, weight, normal force, friction, work, kinetic energy, and potential energy. You are not limited to just these terms, but these are some of the terms we spent the most time discussing this semester.**
- With your voice over, you need to define and put into context at least 9 vocabulary terms from the relevant concepts.
- Relationships between variables should be fully explored. Calculations are not necessary, but variables related to activity should be clearly identified for their relevance (i.e. this person has velocity and that has a squared effect on the person’s displacement when they are accelerating).
- Your video should be not less than 3 and not more than 5 minutes long.
- The commentary should be entertaining, informative, and creative. The commentary should fill the majority of the video (very few moments of dead silence).
- You will turn in a script of your voice over and a link to your video/uploaded video file 24 hours prior to the exam date. Highlight/underline each of the physics terms you use and describe in the video.

Final Evaluation will be determined based on a combined score of teacher and peer evaluations.

Teacher scored rubric = 86.47% (4 sig figs)

Peer scored rubric average = 13.53%

*****All video and commentary must be school appropriate. Any video that contains inappropriate content will receive a score of ZERO for the assessment!**