

Scoring Rubric Engineering Design Challenge

	Smashing/Genius/Excellent	Polished/Pretty Darn Good	Intact/Pretty Good	Unfortunate	Point Earned
1. Participation	Always on task (10-8)	Mostly present, on task (8-7)	Frequently on task (7-6)	Frequently off task (6-0)	
2. Physics Terms	Physics concepts from the chapter are integrated in the appropriate places. Physics terminology and equations are used where appropriate. Correct estimates of the magnitude of physics quantities. Additional research beyond physics concept presented in the chapter. (10-8)	Physics concepts from the chapter are integrated in the appropriate places. Physics terminology and equations are sometimes used where appropriate. No estimates of the magnitude of physics quantities. Additional research beyond physics concept presented in the chapter. (8-7)	Physics concepts from chapter are integrated, not always in the appropriate place. Physics terms and equations NOT used where appropriate. No estimates of the magnitude of physics quantities used. (7-6)	Some physics principles used. Physics concepts from the chapter not integrated in the appropriate place. (6-0)	
3. Quality of Presentation	Well rehearsed. Knowledge of the Engineering challenge. Easy to follow and understand. appropriate amount of narration. Duration between 5-10 minutes (10-8)	Mostly knowledgeable of the Engineering Design challenge. Prepared, but still rough. Easy to follow and understand. Appropriate amount of narration. Duration between 10-5 minutes (8-7)	Somewhat prepared. Not well organized or rehearsed. Duration between 10-5 minutes (7-6)	Unprepared, under-rehearsed. Duration less than 5 minutes (6-0)	
4. Attitude	Cooperative, receptive, positive, dependable, enthusiastic, ready willing able. (10-8)	Helpful to other when asked, involved in the process, not always contributing to positive energy of class, ready to work (8-7)	Physically present, does bear minimum (7-6)	Negative, disrespectful, closed off to people's needs, tunnel vision, coming to class and doing other things (6-0)	
5. Creativity	Willing to risk and final, tries new ideas, imaginative, unique approach (10-8)	Moments of good ideas-not fully thought out, willing to try-but inconsistent inspiration, relatively open-minded, plays it safe (8-7)	Having ideas-but not following impulses, copying with variations, not able to explore material (7-6)	Unwilling to experiment with new ideas, copycat, plagiarism (6-0)	
6. Engineering Process	Presented all seven stages of the Engineering Process, Completely described and conducted test experiments on Model, Experiment is reproducible, Improved model with data obtained from the experiments. Included 2 graphs or tables. (10-8)	Presented all seven stages of the Engineering Process, Incomplete description of conducted test experiment on Model, Some improvements made to Model, Included 2 graphs or table (8-7)	Presented stages of the Engineering Process, Did not conduct an experiment or implement improvements to the Model, Graphs or tables were not related to topic or used inappropriately (7-6)	No evidence of Engineering Design process followed. (6-0)	
7. Model	Model meets all 6 customer requirements (10-8)	Model meets 5 customer requirements (8-7)	Model meet 4 customer requirements (7-6)	Model meets 3 or less customer requirements (6-0)	