

Name: _____
Date: _____

Hershey Park Ride Designers



Guidelines

You are a safety inspector at Hershey Park, and after initial consultation, your job is to improve the safety of identified rides at the park. After identifying the rides in need of improvement, you are assigned to design a new safety design for the passenger cars. This new design will come with a presentation of the facts and your proposed solution. The criteria of success for your design must function to reduce possible injuries of riders and to maintain rider comfort and security during the ride. **Remember, the solution must manipulate the current harness/restraint in some method. It must also eliminate the current constraint/option of adult present, which will allow for additional rider participation.**

Rides (there will only be 2 repeat topics per group):

- Sooper Dooper Looper
- Pirate
- Fender Bender
- The Claw

Presentation:

- You must design a slideshow on your chosen ride. Your presentation will have the following aspects...
 - Current information on the ride - specific height requirement, popularity among park customers, and ride design
 - The forces that are involved in the design of the ride and how these forces keep the ride in motion
 - The current design of the passenger car
 - How the current design of the passenger car can present safety risks to the riders
 - A diagram/picture of the redesigned passenger car and brief explanation of its features and how these features can improve on the safety of the riders

New Seat Design:

- You must design a physical model of your new passenger car for your chosen ride. You can build this car with any arts/crafts materials as long as its safe and of a reasonable size.

- You must bring in the materials necessary for construction in class in order to build the model.
- A picture or diagram of this new design must be uploaded to your slideshow for the group presentation - must be accompanied by an explanation of how it is altered from the previous design and fit the criteria and constraints of the scenario.

For any outside research and/or images, provide a works consulted page by sharing this separately to me once completed. The best projects in terms of display, marketing advertising, and explanation of the physics of the attraction will be chosen for construction.



Names: _____

Hershey Park Ride Designers Rubric

Category	4	3	2	1
Presentation Organization	The presentation is clearly organized based on current information on ride and current passenger car. There is a clear diagram of the newly designed passenger car and explanation of how it has changed from the original design and how it will improve safety.	The presentation is clearly organized based on current information on ride and current passenger car. There is a clear diagram of the newly designed passenger car, but is unclear how it has changed from the original design and how it will improve safety.	The presentation is somewhat organized based on current information on ride and current passenger car. Is missing a clear diagram of the newly designed passenger car or explanation of how it has changed from the original design and how it will improve safety.	Information is missing on current information on ride and current passenger car. Is missing a clear diagram of the newly designed passenger car and explanation of how it has changed from the original design and how it will improve safety.
Passenger Car Design	The physical model of the new passenger car is very well crafted and designed. Fits the criteria of altering the the current harness in order to improve safety and maintain security and rider comfort.	The physical model of the new passenger car is well crafted and designed. Fits the criteria of altering the current harness in order to improve safety, but may lack in rider security and comfort.	The physical model of the new passenger car is not well crafted and designed. May not fit the criteria of altering the current harness in order to improve safety or maintain security and rider comfort.	Multiple aspects of design are missing, and does not fit the criteria of the scenario.
Explanation of Forces in Roller Coaster	The explanations of all of the forces involved such as type, strength, and counteracting forces are well detailed and clear. Any outside research was provided with a works consulted page.	The explanations of all of the forces involved such as type, strength, and counteracting forces have general detail. Any outside research was provided with a works consulted page.	Aspects of all the forces involved such as type, strength, and counteracting forces may be lacking detail and unclear in explanations. There was no works consulted page provided for outside research.	Descriptions of the forces involved lack detail and are unclear. There was no works consulted page provided for outside research.
Increased Participation	It is clear in the presentation that the design of the new passenger car will eliminate the current constraint/option of an adult present with the rider and allow for additional rider participation.	It is somewhat clear in the presentation that the design of the new passenger car will eliminate the current constraint/option of an adult present with the rider and allow for additional rider participation.	It is unclear in the presentation that the design of the new passenger car will eliminate the current constraint/option of an adult present with the rider and allow for additional rider participation.	There is no indication at all that the design will eliminate this current/constraint.
Creativity	Demonstrates great creativity in passenger car design and presentation.	Demonstrates basic levels of creativity in passenger car design and presentation.	Lacks of creativity in passenger car design or presentation.	Lacks creativity overall in both passenger car design and presentation.