

Amusement Park Tasks

Here are some examples of rides at the park that you definitely want to use to complete your assignment.

- The Colossal Fire Dragon--highest height is 85 ft. and length is 2,850 ft.
- Wild Mouse--highest height is 50 ft. and length is 1,200 ft.
- Wooden Roller Coaster--highest height is 60 ft. and length is 2,500 ft.
- Rocket--217 ft. tall
- Sky Coaster--143 ft. tall from the launch
- Jet Star--No data

(Remember, the drop of the Desperado's (Las Vegas, NV) first hill is 220 ft. Compare that to Colossal. And the Superman's height is over 400 ft.)

Remember to:

- Check in with your chaperone between 11:45-12:00. We will be by the entrance walk way as you come in through the gates. Have your assignment done and turn in with your pencil.
- The bus drivers will be at the buses between 11:45-12:30 so you can get your lunch, eat it, and put your stuff back on the bus.
- Start making your way back to bus between 4:00-4:15. The bus is leaving at 4:30. The park closes at 4:00.
- If you are found without a chaperone in the park, you will get the privilege of hanging out with me for the day.

TASK ONE: Choose at least **four** different rides to make observations. You can observe **the structure** of the ride (wheels, chains, materials, sound, etc.) and how the ride effects the motion of your body. Also observe **energy principles** (kinetic and potential energy, energy conversions, etc.)

Example of how you will write on your card. This will go on one side.

Type of ride	Observations
Spinning ride	
Roller coaster ride (wooden or steel)	
Fun and leisurely ride	
Jerky ride	
One motion ride	

TASK TWO: Using no materials other than your body, make up **three experiments** to conduct while riding different rides that might help you make more observations about the force and motion of the ride. This is open-ended and you must think about it. Be creative. **Two** of the experiments must involve **math** in some way (this could be graphs, time measurements, probability...whatever you can think of.)

Write down your experiments, the results, and your conclusions. A chart like this will go on the other side of the card.

Name of ride	Experiments that you tried and the results.

Here are some observations and/or experiments that can be made on certain rides. Think along these lines when completing your card.

1. Do you ever leave your seat when you are upside down in the loop? _____
Why or why not?
2. At what point did you feel close to weightlessness? _____
3. How does riding in the back seat differ from riding in the front seat on some rides?

4. Are you going faster around the loop or on the first drop? Explain your reasoning.

5. How do the rides differ in motion. What effect does each ride want to produce in the rider?

TASK THREE: Persuasive Writing and Reflection: Respond in writing to the following: The school board has decided to not let 8th graders take any trips such as this Lagoon trip in the future. They think students **learn** more by staying at school in a regular classroom and that a trip such as this is a complete waste of time for students, teachers, and parents. Write a letter in response to this comment. Use scientific reasoning, descriptive writing, and persuasive writing techniques to defend your point of view. Do you agree or disagree? Use your personal experience from this as evidence.

Include in your letter a rough sketch of two rides (one must be a roller coaster). Try to make the sketch as accurate as possible to the actual design.

Although this scenario is not true, everyone should be able to defend a trip like this as it relates to learning. We may need your essays in the future to defend this trip and any others in the years to come. Write well!!!!

TASK FOUR: Analyzing Motion Through Probeware:

Check in with Mrs. Maves at one of the six rides when you see her with the laptop and probeware. You will make some observations and answer some questions orally about the data displayed.