

# Bumper Cars

Name

Teacher

Hour

1. What is the minimum height for this ride, IN CENTIMETERS?

2. Fright factor: Rate your experience on the Bumper Cars.

Use the scale: 1 (blah) to 5 (WOW!) Circle the number below:

0 (didn't ride)	1 (blah)	2	3	4	5 (wow)
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3. Count the number of cars.

How many are there of each color? Record your results in the table below.

Color	Number	% of Total

4. Using Newton's First Law, explain why it is important to wear your seat belt:

5. A red car with a large man at the wheel is traveling forward. A blue car with a small girl is at the controls is traveling at the same velocity. When the power is turned off, which car will continue moving the longest?

Explain:

6. Describe what happens when a slow moving car is hit head on by a fast moving car. (Assume equal masses)

The slow car will

The fast moving car will

7. Which of Newton's three laws would allow you to calculate the force involved in the collision of the two cars?
8. Can you control the speed of your car?\_\_\_\_\_ If so, how?\_\_
9. Why do the cars have rubber bumpers?
10. Why wouldn't you design a bumper car with very soft bumpers?
11. What type of electricity is necessary to power the bumper cars: (circle one)  
static or current

**WHY? :**

12. How does this energy get to the cars?
13. The Bumper Cars can only work when you have a closed circuit. How do you close the circuit in your Bumper Car?
14. How do park employees get all the cars to stop at the same time at the end of the ride?