Buggy Speed Lab

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In the buggy lab, we will determine the speed of our cars, and whether they were moving at a constant or changing speed. You will create a brief lab report that shows that motion of the car assigned to you, and you’ll explain how you found the motion of the car. In this lab report you will include several sections, including:

1. Observations (5 points). What are some of the observations we made on the cars? List 10 or more.

2. Questions (3 points). What is going to be the main research question(s) we investigate?

3. Procedures (10 points). List your procedures **in detail.** You may do this in paragraph or list format.

4. Data (15 points). Create any data tables, graph any data, and record any important information about your investigation as possible. This is also the location to include calculations of your answer. Include units on all numbers, and be sure to label all data tables and graphs with axes titles, units, and other appropriate information.

5. Conclusion/Analysis (12 points):

1. Did your car move at a constant speed or changing speed? Explain how you know (2 points)
2. How fast was your car going for its average speed? (2 points)
3. Explain any irregularities in your data collection below (2 points)
4. Based on the data, how far would your car be after 10 seconds? 30 seconds? Show your work (4 points).
5. Velocity and speed are oftentimes considered the same thing, but they are not. Please look up the definition of velocity and explain how it differs from speed (2 points)

6. Grammar/spelling/punctuation (5 points). Each mistake will cost a point, up until the 5 points. Excessive mistakes may require your redoing the assignment.

The TOTAL value for this lab write-up will be 50 points. This is a large chunk of points, but well within your abilities to do.

BONUS: Share data with another group. As a challenge, determine how far apart to start two of the buggies so that they crash at a point determined by me. If the crash occurs within 3 cm of the place I determine, you will earn 10 bonus points. Within 5 cm= 5 points. Within 10 cm= 3 points.

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