

ELED 4045 Signature Assessment Directions

1. Introduction and Research: All three of Newton's Laws of Motion should be fully presented and discussed as well as their application to the Inquiry Investigation with bottle rocket cars. Be sure to cite three or more legitimate resources in the body of your paper and in a separate reference list at the end of your paper. Use APA 7th edition writing style.
2. Rationale for the Study: In this section, you will state the research question posed and answered by the Inquiry Investigation, explain in detail how it was developed, and then state a hypothesis written in an "if...then" format.
3. Materials and Methods: Fully describe the materials used and the methods followed during data collection. Answer the following questions in your description:
 - a) What materials did you use? For example, identify the type, size and shape (possibly the mass) of the bottle used.
 - b) Provide a detailed account of the procedure (data collection plan) followed during the inquiry (step-by-step).
 - c) What types of data (measurements) were collected, and how and when were they collected?
 - d) What were your controlled, manipulated, and responding variables?
 - e) Explain the difference between the control and the experimental set-ups.
4. Results: Complete the following:
 - a) Provide a correctly labeled data table and graph presenting the full results of the investigation.
 - b) The graph provided should contain an appropriate number spread, correctly plotted data points, and appropriate units.
 - c) Graphing space should be appropriately utilized.
 - d) The data table includes a title, labeled columns, and correct units (where appropriate).
5. Analysis and Conclusions: Describe in detail, with specifics and evidence from the investigation, what was learned from the investigation. Respond to the following:
 - a) What did you find out about your manipulated variable? (Use research to back up your findings.)
 - b) What other related questions do you have?
 - c) What did you think about conducting your investigation?
 - d) How could you use this assignment in your future classroom?
 - e) What LA State Standards could you address from this investigation?
 - f) Why or how do these standards fit with the investigation?
 - g) Explain any source(s) of error relating to your investigation.

6. Mechanics: Be sure to meet the following criteria:
 - a) Create a cover page and add the rubric to the end of your paper.
 - b) Use 12-point font and double space.
 - c) Use narrative/paragraph form (i.e., bulleted points occur sparingly).
 - d) Free of spelling and grammatical errors.
 - e) Sources are cited in text and in a reference list per 7th edition APA.