

	Limited Proficiency (1.000 pt.)	Developing Proficiency (2.000 pts)	Proficient (3.000 pts)	Exemplary (4.000 pts)
Introduction and Research CAEP – Initial 2022.R1.2 NSTA.2.A	The candidate discusses the scientific concepts or principles explored.	The candidate discusses the scientific concepts OR principles explored in this investigation OR addresses one of Newton’s Laws. One resource is provided.	The candidate discusses the scientific concepts or principles explored in this investigation and addresses two of Newton’s Laws. Two resources are provided.	The candidate Discusses the appropriate scientific concepts and principles explored in this investigation, and the discussion is free of scientific inaccuracies and misconceptions and addresses all three of Newton’s Laws. Three or more resources are cited and documented appropriately in APA format.
Rationale for the Study INTASC-2013.4 INTASC-2013.5 NSTA.5.A	The candidate provides a research question.	The candidate provides a research question. A hypothesis is included.	The candidate provides a research question with an explanation of how it was developed. A hypothesis stated in an “if...,then,,,” format is included.	The candidate provides a research question and describes in detail how it was developed. A well-crafted hypothesis written in an “if..., then...” format is included.

Materials and Methods INTASC-2013.7 NSTA.1.B	The candidate either describes the materials OR methods used to perform the investigation,	The candidate describes the materials and methods used to perform the investigation.	The candidate describes the materials and methods used for the investigation by answering items a through e below. (a) What materials did you use? For example, identify the type, size and shape (possible the mass) of the bottle used. (b) Provide a detailed account of the procedure (data collection plan) followed during the inquiry (step by step).	The candidate fully describes the materials and methods used for the investigation by answering items a through e below. (a) What materials did you use? For example, identify the type, size and shape (possible the mass) of the bottle used. (b) Provide a detailed account of the procedure (data collection plan) followed during the inquiry (step by step).
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<p>Results INTASC-2013.2.c INTASC-2013.3.c</p>	<p>The candidate provides either a data table OR a graph.</p>	<p>The candidate provides a data table and graph.</p> <p>Graph is titled.</p> <p>Data table is titled, and columns are labeled.</p>	<p>The candidate provides a data table and graph representing the results of the investigation.</p> <p>Graph is labeled correctly, data points are correctly plotted, and units are appropriate.</p> <p>Graphing space is appropriately used.</p> <p>The data table includes a title, labeled columns, and correct units (where appropriate).</p>	<p>The candidate provides a correctly labeled data table and graph presenting the full results of the investigation.</p> <p>Graph contains an appropriate number spread, data points are correctly plotted, and units used are appropriate.</p> <p>Graphing space is appropriately used.</p> <p>The data table includes a title, labeled columns, and correct units (where appropriate).</p> <p>Care has been taken to use color coding and other aids for reader understanding.</p>
<p>Analysis & Conclusions NSTA 1.c</p>	<p>The candidate answers 1 of the questions.</p> <p>a. What did you find out about your manipulated variable? (You must use research to back up findings.)</p> <p>b. What other questions do you have?</p> <p>c. What did you think about doing your investigation?</p>	<p>The candidate answers 2 - 3 of the questions. The responses are aligned with the research questions/variables.</p> <p>a. What did you find out about your manipulated variable? (You must use research to back up findings.)</p> <p>b. What other questions do you have?</p>	<p>The candidate answers 5 - 6 of the questions. The responses are clear, detailed, and fully aligned with the research questions/variables.</p> <p>a. What did you find out about your manipulated variable? (You must use research to back up findings.)</p> <p>b. What other questions do you have?</p>	<p>The candidate describes in detail, with specifics and evidence from the investigation, what was learned from the investigation. The candidate responds to all of the following:</p> <p>a. What did you find out about your manipulated variable? (You must use research to back up findings.)</p> <p>b. What other questions do you have?</p>

	<p>d. How could you use this assignment in your classroom?</p> <p>e. What standards could you address from this investigation?</p> <p>f. Why or how do these standards fit with the investigation?</p> <p>g. Explain any sources of error relating to your investigation.</p>	<p>c. What did you think about doing your investigation?</p> <p>d. How could you use this assignment in your classroom?</p> <p>e. What standards could you address from this investigation?</p> <p>f. Why or how do these standards fit with the investigation?</p> <p>g. Explain any sources of error relating to your investigation.</p>	<p>c. What did you think about doing your investigation?</p> <p>d. How could you use this assignment in your classroom?</p> <p>e. What standards could you address from this investigation?</p> <p>f. Why or how do these standards fit with the investigation?</p> <p>g. Explain any sources of error relating to your investigation.</p>	<p>c. What did you think about doing your investigation?</p> <p>d. How could you use this assignment in your classroom?</p> <p>e. What LA science standards could you address from this investigation?</p> <p>f. Why or how do these standards fit with the investigation?</p> <p>g. Explain any sources of error relating to your investigation.</p>
Mechanics	The paper consists of 0-2 of the required elements.	The paper consists of 3 of the 5 required elements.	The paper consists of 4 of the 5 required elements.	<p>The paper consists all of the following elements:</p> <p>a. A cover page and rubric</p> <p>b. 12-point font and double-spaced</p> <p>c. Narrative/paragraph form (i.e. bulleted points occur sparingly)</p> <p>d. Free of spelling and grammatical errors</p> <p>e. Sources are cited in text and in a references list per 7th edition APA.</p>

