

## Craters Lab Report

*Use of the scientific method to test the effect of speed of impactor on crater size*

### OVERALL SCORE:

<b><u>Novice</u></b> <i>begins to approach expectations</i>	<b><u>Apprentice</u></b> <i>approaches expectations</i>	<b><u>Proficient</u></b> <i>meets expectations</i>	<b><u>Distinguished</u></b> <i>exceeds expectations</i>
<input type="checkbox"/>	<input type="checkbox"/>	<b><u>Content</u></b> <input type="checkbox"/> Does your hypothesis predict an answer for your research question that is based on your prior knowledge or observations you have made?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Did you list all materials needed to complete the experiment?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Is your method a clear, step-by-step record of what you did to complete the experiment?	<input type="checkbox"/> Did you create another related testable question and write a method to explore this question, controlling variables?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Is your data complete with accurate measurements?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Are your graphs plotted accurately?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Does your discussion section tell whether your hypothesis was correct or incorrect?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Have you formed a logical conclusion (explanation of the data, answering the research question)? Have you used the data to support your conclusion?	<input type="checkbox"/>

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		<b><u>Quality and Format</u></b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Is your lab report neatly handwritten or typed?	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Have you used the peer editing/conferencing form to revise and edit your writing? Can we see evidence of improvements made from rough to final draft?	<input type="checkbox"/>
		<b><u>Process</u></b>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Community Membership: Did you work cooperatively with your lab group?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Self-Direction: Did you use class time effectively?	<input type="checkbox"/>

## Steps to Success

### STEPS:

1. In your journal, record a hypothesis that predicts the outcome of our experiment and an explanation for why you think this will happen.
2. As a class, we will discuss variables in the experiment and design an experiment to test this research question. Record this in your journal.
3. Set up and carry out experiment as planned by class.
4. Record observations on data sheet.
5. Graph data.
6. Discuss your data with your lab group and what it tells you about your research question.
7. Begin writing your lab report. Write the Discussion section first.
8. Finish writing the other sections of the report. **ROUGH DRAFT DUE :** \_\_\_\_\_

9. Peer Edit, using peer editing sheet.

10. Use peer editing sheet and teacher feedback to revise and make changes to rough draft.

11. Write a final draft of lab report.

**FINAL DRAFT DUE :** \_\_\_\_\_

Extension Ideas:

1. Design another experiment about impact craters. Remember to control variables, except for the one you are testing (the independent variable). Write out the steps to your experiment. If you have time, perform your test and include your results in your report.