

Chemical Weathering Lab Report

Use of the scientific method to test the effect of chemical weathering on different rock samples

OVERALL SCORE:

<u>Novice</u> <i>begins to approach expectations</i>	<u>Apprentice</u> <i>approaches expectations</i>	<u>Proficient</u> <i>meets expectations</i>	<u>Distinguished</u> <i>exceeds expectations</i>
<input type="checkbox"/>	<input type="checkbox"/>	<p><u>Content</u></p> <p>Hypothesis</p> <p><input type="checkbox"/> Does your hypothesis predict a testable answer for your research question that is based on prior knowledge and observations you have made?</p>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<p>Method</p> <p><input type="checkbox"/> Do you include a detailed method for doing the experiment that follows a logical sequence of steps?</p> <p><input type="checkbox"/> Do you mention in your steps each of the materials that you listed in the materials section, and use appropriate science vocabulary ?</p>	<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"/>	<p>Observations & Results</p> <p><input type="checkbox"/> Are your descriptions in your observations section factual with specific detailed language? Can you tell how the rock sample has or has not changed over time?</p>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<p>Discussion</p> <p><input type="checkbox"/> Do you tell whether your hypothesis was correct or incorrect, comparing your results with your prediction?</p>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<p>Discussion</p>	<input type="checkbox"/>

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<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Do you tell why your hypothesis was correct or incorrect using the data you collected to support your explanation? <input type="checkbox"/> Have you explained what the results of your experiment tell you about your original research question, forming logical conclusions based on your data? (PS) <input type="checkbox"/> Have you supported your conclusion by discussing your data? <input type="checkbox"/> Does your work demonstrate your understanding of the concepts of weathering and erosion?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		<u>Quality and Format</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Is your data neatly recorded in a table or chart?	<input type="checkbox"/>
<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"/> Effective Communication: 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"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Effective Communication: Did you express your written ideas clearly?	<input type="checkbox"/>
		<u>Process</u>	
<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

In order to do well you should follow these steps. Be sure to answer any guiding questions!

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. Record ‘before’ observations.
- 4. Set up and carry out experiment as planned by class.
- 5. Begin writing Part 1 of lab report (hypothesis, procedure).
- 6. Record observations.
- 7. Discuss with your lab group your data and what it tells you about your research question.
- 8. Begin writing Part 2 of lab report (data, conclusions).
- 9. Peer Edit, using peer editing sheet.
- 10. Use peer editing sheet to revise and make changes to rough draft.
- 11. Write a final draft of lab report.

Extension Ideas:

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