

Parent Signature: _____
 Please sign and return so students may file in working portfolio

Name

Date

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>
		<u>Content</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Does your hypothesis predict a testable answer for your research question?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Do you list all of the materials needed to do your experiment?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Is your method section a clear, step-by-step record of what you did to complete the experiment, using science vocabulary?	<input type="checkbox"/> Did you create another related testable question and write a method to test this question, controlling variables?
<input type="checkbox"/>	<input type="checkbox"/>	<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?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Does your discussion tell whether your hypothesis was correct or incorrect, comparing your results with your prediction?	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Discussion: Have you formed logical	<input type="checkbox"/>

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		conclusions based on your data? Have you supported your conclusion by discussing your observations?	
<input type="checkbox"/>	<input type="checkbox"/>	<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"/>	<input type="checkbox"/> Effective Communication: Is your writing clear and easy to understand?	<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"/> 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"/>
		<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 in your data table.
- 4. Set up and carry out experiment as planned by class.
- 5. Begin writing Part 1 of your lab report rough draft (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 your lab report rough draft (data, conclusions).
- 9. Revise and edit your own writing.
- 10. Peer Edit, using peer editing sheet.
- 11. Use peer editing sheet to revise and make changes to rough draft.
- 12. Write a final draft of lab report.

Guiding questions for writing the lab conclusion:

- Does the data you gathered support the hypothesis?
- Which data in particular support your hypothesis?
- Are there any data that are not clear? Why do you think this is so?
- Has anything occurred during your test that raises new questions? If so, discuss them.
- What does your data tell you about your research question: Do rocks weather at the same rate?
- Which rock(s) weathered the most? What evidence do you have of this?
- Which rock(s) weathered the least? What evidence do you have of this?

Extension Ideas:

1. Design another experiment about weathering or erosion. 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.