

Key Question: How does atomic level structure explain the properties observed at the macroscopic level?

This is a graded assignment contributing to ALT 7 inquiry. Everyone should aim to improve on this summary compared to earlier ones. For example if you earned a “2” on the Precipitate Lab Summary, examine the rubric closely and work to meet the requirements for a “3” or “4.”

Step 1: Answer questions on the next page. Incorporate what you learned from the jigsaw reading and lab.

Step 2: Review the Rubric below and then write your summary to meet it. Use your answers to the questions to inform a novice reader about the lab. A paragraph or two is ideal. Do not just string together your answers to the questions. You need to include transition words and sentences that tie the ideas together and make it easy for your reader to follow.

Here is a sample outline:

1. A topic sentence that grabs the reader’s attention and introduces non-Newtonian fluids and the idea that chemical change produces new substances with different properties than reactants.
2. A few sentences describing background information.
 - a. The primary goal of the experiment.
 - b. Explanations of the scientific principles involved (non-Newtonian fluid, shear stress, cross-linking, chemical change)
3. Observations from the lab to support your claims about the scientific principles.
4. A concluding sentence that ties to your introduction and brings your paragraph to a close.

Rubric the Slime Lab Summary

Students earning a “2” or “1” may revise one time to raise proficiency to a “3.”

Report Aspects	4 “Highly Proficient”	3 “Proficient”	2 “Nearly Proficient”	1 “Beginning Proficient”
Writing Style:	<input type="checkbox"/> Summary has a strong & unique topic sentence. <input type="checkbox"/> The closing sentence relates well with the topic sentence. <input type="checkbox"/> It is communicated in a well-written paragraph (or two) including complete sentences, correct spelling, grammar and punctuation.	<input type="checkbox"/> Summary has a relevant topic sentence. <input type="checkbox"/> The closing sentence relates well with the topic sentence. <input type="checkbox"/> It is a paragraph (or two) including complete sentences, correct spelling, grammar and punctuation with only <u>minor errors</u> .	<input type="checkbox"/> Summary has a fairly relevant topic sentence. <input type="checkbox"/> The closing sentence does relate well with the topic sentence. <input type="checkbox"/> It is communicated in a paragraph (or two) including sentences, spelling, grammar and punctuation with <u>some errors</u> .	<input type="checkbox"/> Summary may or may not have a topic sentence. <input type="checkbox"/> It has no closing sentence or it does not relate with the topic sentence. <input type="checkbox"/> It is communicated in a paragraph (or two) but includes sentence fragments, poor spelling, poor grammar and punctuation.
Concepts: <input type="checkbox"/> Non-Newtonian fluid <input type="checkbox"/> Shear stress <input type="checkbox"/> cross-linking <input type="checkbox"/> chemical change	<input type="checkbox"/> The chemistry concepts are all included and are accurately defined.	<input type="checkbox"/> The chemistry concepts are defined with minor error.	<input type="checkbox"/> Some chemistry concepts are not included or are defined with some error.*	<input type="checkbox"/> The chemistry concepts are defined with major error or missing altogether.*
Evidence: Concepts are supported or explained with evidence from the lab and reading.	<input type="checkbox"/> The paragraph body includes very strong evidence and <u>several examples</u> to support explanation.	<input type="checkbox"/> The paragraph body includes evidence and <u>at least one example</u> to support explanation.	<input type="checkbox"/> The paragraph body includes some evidence and examples to support explanation.*	<input type="checkbox"/> The paragraph body includes evidence and examples to support explanation but is not relevant.*

* may be met with correct responses to the supplied page of questions

What chemistry did you learn today by making and investigating slime? Connect your observations to what you learned about non-Newtonian fluids and the molecular level structure of Slime (cross-linking).

1. Write a sentence to introduce the topic of the lab today.

2. Describe the properties and characteristics of the reactants before mixing them together.

3. Briefly describe how you made the slime.

4. What new properties did you observe in the slime that glue and Borax did not exhibit?

5. Write a sentence to introduce a non-Newtonian fluid to your reader. What is a shear stress?
Is Slime a non-Newtonian fluid?

6. Describe in your own words how cross-linking is related to the properties of the slime.

7. Write a concluding sentence that relates to your topic sentence.
