

Chemistry Post-Lab Narrative

The structure you will use

Introduction

- Begin with 2-4 short sentences that describe what you are going to discuss.
 - Example
 - “It turns out that solids have different properties depending on their structure and the intramolecular and intermolecular forces that hold them together.”

Body Paragraphs

(The numbers signify what kind of information goes where in the body paragraph. They won't actually be there in the final copy. The numbers are a guide to help you form body paragraphs until you are comfortable doing it on your own.)

- 1) Introduce the topics being discussed, 2) discuss the data/conclusions/findings that demonstrate the bonding theory associated with each compound 3) give a specific reason why the data demonstrates the theory (molecular structure, bonds, intermolecular forces), and 4) discuss the meaning of that reason.
 - Example
 - 1) The solid compounds tested in this experiment varied widely in volatility. 2) Stearic acid exhibited a very high volatility giving off the odor of crayons; sucrose gave a slight candy like smell; while aluminum, silicon dioxide, and sodium chloride show very little if any volatility with no discernable odor. 3) This is because weaker Van der Waal's forces hold stearic acid and sucrose molecules together, and strong intramolecular bonds hold the aluminum, silicon dioxide, and sodium chloride together. 4) As a result, the stearic acid and sucrose molecules are more capable of leaving the surface of the solid and being detected as a vapor, while aluminum atoms, silicon dioxide molecules, and sodium chloride ions are bonded tightly to the other samples and are very unlikely to break free of these much stronger bonds.

YOUR TASK

- Each student needs to write a paper/conclusion comparing the melting point, conductivity, and brittleness of each compound and explain each property in terms of its intermolecular and intramolecular forces.
- Each student needs to write body paragraphs following the 1-2-3-4 structure from above.
- Example:(this paragraph only compares 2 substances, but yours will have 5)
 - 1) Aluminum and sodium chloride behave differently in water. 2) Aluminum does _____, while sodium chloride does _____. 3) This is the result of their structures, because aluminum has _____, and sodium chloride has _____. 4) This is significant to their reactions because _____.

RUBRIC

| Rubric | Points/each property and substance |
|---|--|
| Content <ul style="list-style-type: none">• Valid, accurate scientific information• Comparison of behavior observed for different substances• Specific discussion of structure as it relates to observed behavior | <u>2pt</u> <u>2pt</u> <u>2pt</u> |
| Organization <ul style="list-style-type: none">• Straightforward, logical paragraph structure (as outlined in class) | <u>2pts</u> |
| Language Conventions <ul style="list-style-type: none">• Clear identification of substances (Avoiding “it” in favor of “Silicon Dioxide”)• Few, if any, spelling or grammar errors• Appropriate use of new scientific vocabulary | <u>1pt</u> <u>1pt</u> <u>2pt</u> |