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| --- | --- |
| **What to Write About in Your Conclusion**  (Each item below must be written in its **own paragraph** in the order shown) | How to Write About It |
| 1. Refer back to the **hypothesis**. | “I thought that…” |
| 2. Answer the **problem question**. | “I found that…” |
| 3. Use **observations/data** gathered in the experiment. | “My data showed that…” Example: “ My data showed that the plant grew 15 cm in 3 weeks.” |
| 4. Explain in the words of a scientist why you got the results you did.  *Do NOT tell about the procedures, talk about science concepts that we have been learning about.* | “I got my results because…” or “I think \_\_\_\_ happened because…” |
| 5. Error Analysis: Could an error in the design of the experiment have affected the results? How? (Talk about only 1 error) | “I think \_\_\_\_ could have affected my results because…” |
| 6. Error Prevention: How could the error you identified above be prevented to improve the experiment? | “If I were to do this experiment again, I could prevent this error by … |
| 7. Future Research related to the current experiment. | “In the future I would like to investigate…” |
| 8. Application Questions: Can you apply what you’ve learned in this experiment to other situations?  *This is just the answers to the Application Questions at the end of the lab.* | In paragraph form, answer any questions that might be asked about the experiment. Each response to each question should be in its own paragraph. Application questions can be found above this chart. |

**Rubric**:

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| --- | --- | --- | --- | --- |
|  | **WELL DONE**  **(4)** | **ALMOST THERE (3)** | **NEEDS**  **IMPROVEMENT (2)** | **INCOMPLETE (0)** |
| Hypothesis | Clearly answers the problem question and written in “If … then …because…” format | Hypothesis is incomplete or lacks clarity | Does not answer the problem question or not written in  “If … then … because…” format | Does not include the hypothesis |
| Conclusion | Refers back to the hypothesis, answers the problem question, uses specific observations from experiment to show that hypothesis was supported or rejected | 1 of these requirements not met | 2 of these requirements not met | None of these requirements are met |
| Detailed and correct explanation of experimental results | Explanation of experimental results not detailed | Explanation of experimental results not correct | Explanation of experimental results not included |
| - Identification of a significant source of experimental error. - Detailed discussion of how the experimental error could have affected the experimental results  - Thorough explanation for how to prevent the error in the future. | - Identification of insignificant source of experimental error.  - Unclear discussion of how the experimental error could have affected the experimental results.  - Ideas for error prevention are unclear. | - Identifies error that could have been prevented by following instructions.  - Discussion of how the experimental error could have affected the experimental results is incorrect.  - Discussion of how to prevent error in the future is incorrect. | Discussion of errors and error prevention not included |
| Detailed identification of a related and significant future research possibility. | Future research possibility is related and significant but without details. | Unrelated or insignificant future research possibility. | Discussion of future research possibilities not included |
| Has answered all application questions correctly | Minor mistakes when answering application questions | Multiple mistakes in answers for application questions | Does not answer application questions |
| Format | Title, name, date and period given  Typed  12 pt. font  Single spaced | 1-2 are missing | 3-5 are missing | Not included |