The Lab Write-Up

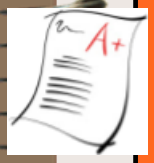
FIRST PAGE:
TITLE PAGE

Information should be centered on the front page and include the following:

TITLE:
Description or
topic of the experiment
DATE:
When experiment began
YOUR NAME:
Adam Baum
YOUR CLASS PERIOD:
LAB PARTNERS:
Ferris Wheeler, Anita Bathe,
Tad Pohl

REMAINING PAGE(S):
PURPOSE/QUESTION

State the problem or question you are trying to answer in the lab. Make sure you have written a proper <u>testable question</u> following these criteria:



- Should not be a YES/NO question
- Use HOW, WHAT, WHEN, WHERE
- Give specific criteria and conditions

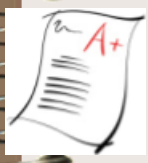
HYPOTHESIS
(FOR REGULAR BIOLOGY)

Should be written as an "if,then because" statement, including both the independent and dependent variables.

"If _____(independent variable)_____ then _____(dependent variable)_____ because _____(reason)_____."

Be sure to identify the following parts of YOUR experiment:

- Independent variable = factor that is manipulated or intentionally changed
- Dependent variable = what you are measuring/observing, responds to the change in the independent variable
- Constants = factors that are kept the same for each trial
- Control = a standard/reference point to which the results are compared to



HYPOTHESIS
(FOR HONORS & ADVANCED/EXCEEDING GRADES IN REGULAR)

Should be a clear, concise prediction about the outcome of the investigation.

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- Constants = factors that are kept the same for each trial
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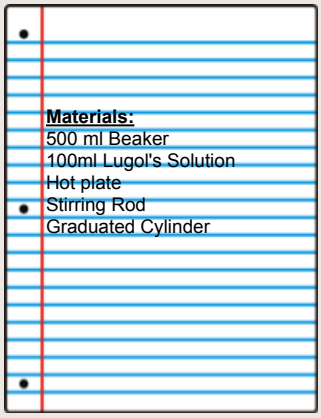
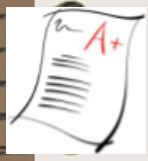
MATERIALS

A complete list of all materials needed to conduct the experiment.

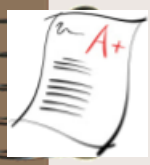
- Should be listed in a column format
- Includes precise quantities
- Detailed





PROCEDURE

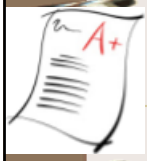
A sequential, detailed explanation of the steps to carry out the experiment. This should be written as step-by-step directions to conducting the lab. Write it in a manner that could be followed and repeated by someone else. Be very clear and exact with your directions.



EXAMPLE:

1. Zero-out scale, place red ball on scale and obtain mass of red ball.
2. Record mass in data table.
3. Repeat steps 1 & 2 for the blue, green and yellow ball.

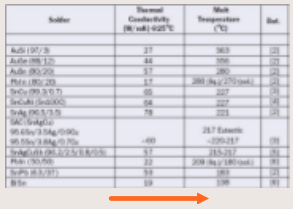
Pull

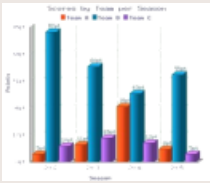


DATA

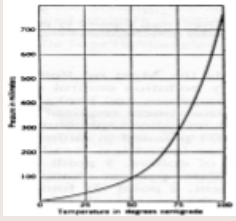
This is a visual representation of your results. Display the results in a table, chart and/or graph format. Make sure all parts are correctly labeled, titled and include a key. At least two trials must be completed.

Be sure to include the results of all trials in a table





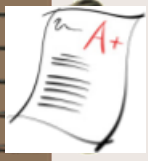
Averages/group data should then be translated into a graph for analysis.



ANALYSIS

This section should be written in paragraph format and include the following components:

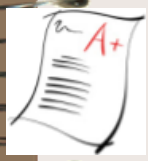
- This is where the results of your experiment get interpreted. In other words, this is where you EXPLAIN what happened and make connections to the content being explored using specific examples.
- Restate the hypothesis
- State whether or not your hypothesis was supported.
- Includes at least 3 examples of how your data supports or rejects the hypothesis.

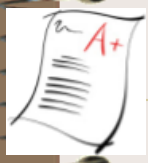


CONCLUSION

This is the 2nd paragraph of the section and includes:

- Includes at least 2 errors that could have occurred, or did occur, in the experiment
- Suggests how to avoid the errors the next time, or improve the experiment.
- Explains any unexpected results.
- Proposes at least 2 further investigations based on the findings that may improve future experiments





THINGS TO CONSIDER...

Although you are working in groups for labs, your write up should be your own, original work.

Take pride in your work: neatness, grammar, organization are important in conveying clear results.

Critical thinking sets apart a "good" lab from a "GREAT" one!