

Scientific Method Experiment Rubric

Problem - the problem is the question that you are trying to answer.

- 2 Points** if the problem is written in the form of a question and is a complete sentence with a question mark at the end.
- 1 Point** if the problem is not written in the form of a question or is an incomplete sentence or is missing the question mark.

Hypothesis - a hypothesis is your educated guess at the answer to the problem.

- 2 Points** if the hypothesis is written as a guess or explanation to the answer of the problem and in a complete sentence. (I think ..., I hypothesize ..., If.. then...)
- 1 Point** if the hypothesis is not written in a complete sentence or is not a guess to the problem.

Identifying the Variables and Controls - a variable is the one thing in the experiment that is different in each test. The variable is what you are testing. The controls are the parts of the experiment that are kept the same in each test.

- 2 Points** if the variable and controls are clearly identified.
- 1 Point** if only the variable or the controls are clearly identified.
- 0 Points** if only neither the variable or the controls are clearly identified.

Procedure - the procedure is a step-by-step explanation of how to perform the experiment. To receive all 4 points the procedure must include all of the following:

- a. Procedure steps must be numbered
 - b. Procedure steps must be in the correct order
 - c. Procedure steps must include instructions on what to measure and where to record the data.
 - d. Procedure steps must be written in complete sentences.
- 4 Points** if all four requirements have been met.
 - 3 Points** if only three of the requirements have been completed.
 - 2 Points** if only two of the requirements have been completed.
 - 1 Points** if only one of the requirements have been completed.

Data - the data is the information collected from the experiment. It can be in the form of measurements or observations. Data is usually written in some kind of data table.

- 3 Points** if the data is organized in a data table or paragraph written in complete sentences. Also, includes more than one trial. All numbers have labels.(cm., ml., g.)
- 2 Points** if the data is organized in a data table or paragraph written in complete sentences. Only includes one trial or numbers are not labeled.
- 1 Point** if the data is not organized in a table or paragraph with complete sentences or if only one trial was performed and numbers are not labeled.

Results - the results are the part of the experiment where you analyze the data. This is where calculations are performed and a graph is drawn. (*The graph carries its own 10 point grade.*)

- 3 Points** if all calculations were completed and a the correct graph type (bar, line, pie) has been drawn.
- 2 Points** if calculations were completed, but not correctly or a graph is drawn, but it is not the correct type.
- 1 Point** if the calculations were not completed or a graph was not completed.
- 0 Points** if the neither the calculations or the graph were completed.

Conclusion - the conclusion is the part of the experiment where you answer the problem. Your answer should also respond to your hypothesis stating whether you were correct or incorrect. A correctly written conclusion must include all of the following:

- a. Written in complete sentences.
 - b. Responded as to whether your hypothesis was right or wrong.
 - c. Answered the question written in the problem.
- 3 Points** if the conclusion includes all three requirements.
 - 2 Points** if the conclusion included two out of three requirements.
 - 1 Point** if the conclusion included one out of three requirements
 - 0 Points** if the conclusion did not include any of the three requirements.

Neatness and Organization - your lab report must be written on a clean and unwrinkled paper. Your handwriting should be clear and easy to read.

- 1 Point** if the lab report is clean, unwrinkled, and easy to read.
- 0 Points** if the lab report is stained, wrinkled, or difficult to read.