

Name _____

Date _____ Period ____

Scientific Inquiry Process Criteria

I. IDENTIFY THE PROBLEM (What do you want to find out?)

- A. Is it _____
- B. Is it _____
- C. Is it _____
- D. Is it _____
- E. Is it possible to experiment?

II. BACKGROUND INFORMATION (Minimum of three different sources)

- A. _____
- B. Books or magazines
- C. _____
- D. _____
- E. Multimedia (videos, tapes, CD, movies)
- F. _____

III. HYPOTHESIS

- A. _____
- B. The hypothesis is the _____
- C. Is it based on _____
- D. Is it related to the _____
- E. Is it _____

IV. EXPERIMENTAL DESIGN

- A. Make a complete list of all materials/equipment you need
- B. Be specific and include :
 - 1. The _____
 - 2. Identify _____
 - 3. List the specific _____
 - 4. Use _____

V. PROCEDURES

- A. Write accurate _____ directions, like a _____.
- B. Can it be _____
- C. Is it easily _____ ? (Can someone else follow it?)
- D. Did you identify the _____

VI. OBSERVATION / DATA COLLECTION

- A. Collect data at least _____ times.
- B. Record observations in your _____.
- C. Design your data table.
 - 1. Include a _____
 - 2. Include _____ for each data table. (Figure 1, Figure 2, etc.)
 - 3. _____
 - 4. Include a _____
 - 5. Is the data related to the topic? _____
 - 6. Be _____

VII. RESULTS (create a visual of the data in the form of a graph)

- A. Graph designs must include:
 - 1. _____
 - 2. A _____ (A graph showing ...)
 - 3. A _____ (Figure 1, Figure 2, etc.)
 - 4. Labels using _____
 - 5. Data that reflects the experiment results.
 - 6. An appropriate type of graph : _____
 - 7. Neatness, legibility and well organized

VII. DATA ANALYSIS / CONCLUSION

- A. Discuss any _____
- B. Calculate mathematical averages, _____
- C. _____
- D. _____

VIII. CONCLUSION (What did I find out or learn from the experiment)

- A. Explain if your results agree or disagree with your _____
- B. _____
- C. Include any _____ to improve this project.

Glossary of science experiment terms

1. _____ an educated guess about how the independent variable will affect the dependent variable.
2. _____ the things in the experiment that change or could be changed
3. _____ the variable you change on purpose
4. _____ the variable that responds to the independent variable
5. _____ the standard for comparison
6. _____ the things in the experiment that are kept the same for all trials