Lab 01.3a
Observation of a Candle

I. PURPOSE
To learn how to make and record valid laboratory observations.

II. MATERIALS
1. candle
2. card stock
3. matches
4. any other equipment needed for observations

III. PROCEDURES
1. For about 10 minutes observe the unlighted candle and list observations in the data table under the heading “Observations of an Unlighted Candle”. Use any equipment from your lab drawer and any other equipment the instructor is willing to provide.
2. When instructed to light the candle, place it on a card stock base, light the wick and begin a new list observations in the data table under the heading “Observations of a Lighted Candle”.
3. When instructed to extinguish the candle, blow it out gently and begin a new list observations in the data table under the heading “Observations of the Extinguished Candle”.

IV. PRE-LAB QUESTIONS
1. What is an inference?
2. What is the difference between qualitative observations and quantitative observations?
3. What is the purpose of the card stock base?
4. What is the reason for making observations after the candle has been blown out?

V. DATA & CALCULATIONS

A. DATA
Create a numbered list for each set of observations. Make only one column of data. When the bottom margin is reached, continue the list onto the next page.

B. CALCULATIONS
None

VI. QUESTIONS & DISCUSSION OF ERROR

A. QUESTIONS
1. List 3 qualitative observations from the data. Explain the strengths and weaknesses of qualitative observations.
2. List 3 quantitative observations from the data. Explain the strengths and weaknesses of quantitative observations.
3. Based on the strengths and weaknesses of each type of observation, which is better for describing objects? Explain your rationale.
4. Were any of the observations not true observations (i.e., inferences, assumptions, etc.)? Explain.

B. DISCUSSION OF ERROR

VII. CONCLUSION

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