Name _____ Date _____

Formal Lab Planning Sheet (*use the boxes provided to help organize your Formal Lab report. The* ***section titles are in bold and should be included*** *in your Formal Lab.* ***Write in 3rd person*** ***(i.e. Table 3 wondered…)***

Title of the Lab: *EXPONENTIAL BACTERIAL GROWTH IN A PETRI DISH*

QUESTION*: *How can a Petri dish containing bacteria and/or mold samples from around the classroom model exponential growth? How long will it be before a bacteria colony can be seen?

1. Introduction/ Purpose (Paragraph 1)

Topic Sentence that relates to the question and general idea to be explored:

Background: 3-5 sentences describing the important scientific principles and vocabulary central to this lab.
Key words & Concepts: ***bacteria, colony, exponential growth, percent visible***

Hypothesis (What I think will happen — In the format of: *If…then…because*):

How will this hypothesis be tested? (Explanation of the procedure in 1-2 sentences).

2. Variables:

Identify the *variables* in this experiment: (Bullet answers to these questions in complete sentences)

- ❑ ***Manipulated*** (Independent) Variable: (What I will change)
- ❑ ***Control*** Variable (What I will keep the same):
- ❑ ***Responding*** *(*Dependent) Variable (what I will look for):
- ❑ ***Quantified*** What will be measured in this experiment?

3. Materials, Procedures, and Labeled Diagram

List your materials used
(Don't include things that you always use, like pencils and paper).:
- ☐ -
- ☐ -
- ☐ -
- ☐ -

Procedure: (Describe your experimental actions so they could be completed by someone else)
1.
2.
3.
4.
5.

Labeled Diagram (Show how to set-up you experiment on separate sheet of paper)

4. Observations and Data

If you are measuring something (quantitative) make a chart here.
If you are observing a reactions (qualitative) bullet what you see, hear, or smell.
Once you have filled this space with observations, go back and see if any are related.
Example: Result A happened because of this set of events.

Answer any questions that are part of the lab handout or asked of your independent experiment.

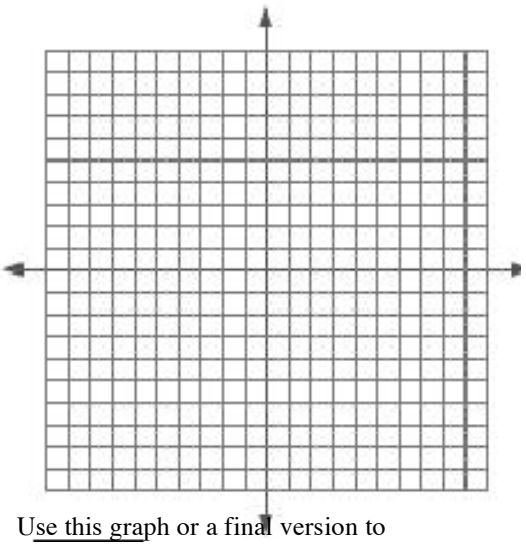
5. Analysis and Conclusion

(Interpret and summarize data, calculations included in the lab) Justify your results.

1st Start with a catchy topic sentence whether your hypothesis is supported or not supported.

3-5 sentences summarizing your observations or data collected.
Be sure to cite your data (Hy-Hi-Lo)

Synthesize any conclusion you made from this lab based on
The data collected and observations taken. (e.g. *The data shows that my hypothesis was supported or not supported because…)*



Use this graph or a final version to communicate your findings if no other graph is given out.

6. Error Analysis ; (2-3 sentences) Evaluate the validity of the results. Write anything that could have affected results and how it affected results. *Explain what you would do to fix each error*.