Name
Partner Name
Date
Period

Give your lab a TITLE such as: The effect of incandescent light distance on duckweed mortality

☞Remember – no pronouns, like "it", "our", "my", etc. ☜

Background/Question/Hypothesis

This is one paragraph where you are going to outline the lab. Your first sentence could be an introduction to the topic of the investigation – in this case photosynthesis. The first sentence may give a general overview of the concept being studied - something such as: "Green plants depend on the energy of light to stay alive." Next should be the question you are addressing with this report. For example, for this lab you would write "How does the distance from a light source affect the mortality rate of duckweed plants?" Your next sentence should be your hypothesis utilizing your question as the basis. For example "If the distance to an incandescent light decreases, then the duckweed mortality will increase." Following the hypothesis, your report will provide support for the prediction based on research (this is your "because…" part). You should cite three sources (such as the textbook, lecture, websites) that support and explain your reasoning – restating and/or quoting information from the source.

Procedure section

Variables:

Typically, listing variables is not part of a true lab report – but I would like to see that you clearly have identified them, so please list:

Manipulated variable -
Responding variable –
Controlled variables (at least 2, probably more) -
Experimental Control-

Materials

Item		

Procedure steps

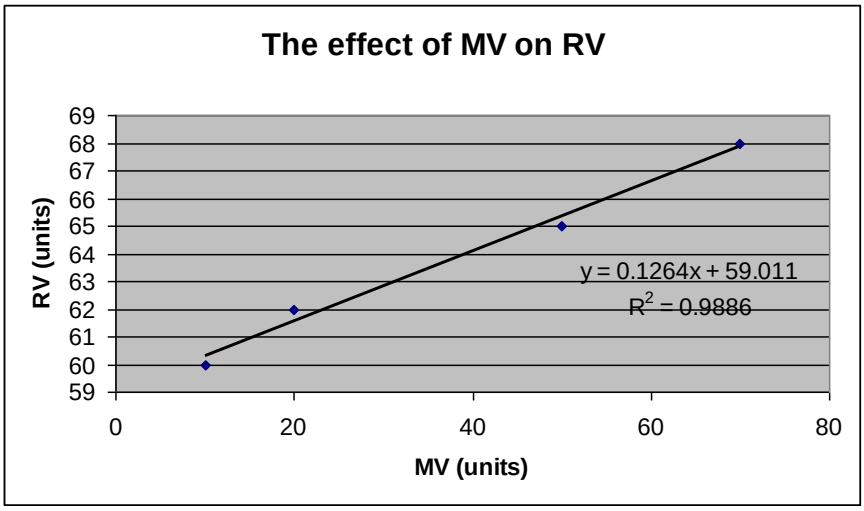
1. **DO NOT SAY "GATHER MATERIALS". We know you need them – you listed them up above. Now you explain how to USE each.**
2. **Each step you take**
3. **Must be listed in numbered steps**
4. **If you have more than ten steps**
5. **Check to see if you can write them as a repeatable step**
6. **Be sure each of the variables (from above) is addressed in your steps**
7. **Address safety concerns and possible errors to avoid**

Data/Analysis ☞Remember – use SI units like liters, meters, etc**.** ☜
**Do not put units in individual cells with data – put at top of column
Table1: The effect of the manipulated variable on responding variable

(Here you can insert your own table or use this)

Manipulated Variable (units)	Responding Variable (units)			
	Trial 1	Trial 2	Trial 3	Average

Graph – paste in from other source (excel template for linear data or graph from online text). Most likely a line graph – manipulated variable should have numerical values and goes on the X-axis.



Data analysis: First - report what is happening in the data. For example: As the distance to the light increases the number of living plants rapidly decreases. Second – discuss the reliability and consistency of the data. Compare trials of same conditions, are they similar, in the same range? Or are the data mixed – do some trials have data that do not follow the overall pattern? DO NOT TRY TO EXPLAIN WHY – YOU WILL DO THAT IN THE CONCLUSION

Conclusion

First, tell whether or not the evidence in this investigation supports the hypothesis (your statement should reflect what the hypothesis is in context, but do not just restate). Remember, an experiment cannot ***prove*** a hypothesis, just support.

Second, support your stated relationship between variables by providing specific data. These data should be averages of high and low conditions – NOT individual trials. Do not simply list the data – use comparison words that provide context and clearly explain the trend you are discussing. Do not make the reader do the thinking – that is your job.

Next, discuss the **concepts** behind the answer. Connect to your original support and the sources from the hypothesis. These sentences should tie the results back to the science material we are covering in class.

What are some possible sources of error in your lab procedure? How did these possibly affect the results? Do the results make sense or are there inconsistencies that throw doubt on your conclusion. How could these have affected your results?

Finally, what is next? What new questions do you results raise? What could you investigate further? What would be your new hypothesis? Discuss.