

## LAB REPORT RUBRIC

Lab reports are very important in science. They are our major method of sharing what we do. They let everyone know the quality of our work and how we did it. Your lab report should have enough detail so that others could duplicate your work and get the same results. The lab report is usually due two days after we complete the **discussion** of the lab. **Your grade will be based on what you submit on the due date.**

### OBJECTIVE

In almost all cases this is given to you at the top of the lab. It should be expressed in the form of a question.

### HYPOTHESIS (4 Points)

**4 POINTS** — The hypothesis is stated in a complete sentence with no pronouns. It gives a logical answer to the **Objective**.

**3 POINTS** — The hypothesis is not a complete sentence. It gives a logical answer to the **Objective**.

**2 POINTS** — The hypothesis uses one or more pronouns clouding the answer.

**1 POINT** — The hypothesis uses one or more pronouns clouding the answer, and it is not a complete sentence.

**0 POINTS** — No answer is given

### INDEPENDENT VARIABLE (4 POINTS)

The independent variable is the variable the scientist doing the experiment controls.

**4 POINTS** — The correct variable is clearly stated.

**3 POINTS** — There is confusion over what the variable actually is. This usually happens when a pronoun is used.

**2 POINTS** — The answer is very vague.

**1 POINTS** — **The dependent variable** is given as the answer.

**0 POINTS** — No answer is given.

### DEPENDENT VARIABLE (4 POINTS)

The dependent variable is the variable that changes because of the independent variable.

**4 POINTS** — The correct variable is clearly stated.

**3 POINTS** — There is confusion over what the variable actually is. This usually happens when a pronoun is used.

**2 POINTS** — The answer is very vague.

**1 POINTS** — **The independent variable** is given as the answer.

**0 POINTS** — No answer is given.

### **CONTROL (4 POINTS)**

How do you know that the change in the lab was *really* brought about by the independent variable. By using a *control*. If it's at all possible we will try to do the experiment *without* the independent variable to see if the dependent variable still happens. In *most* cases we can't do this because our experiments are so simple. We will attempt to use this valuable tool whenever we can.

**4 POINTS** – The correct control is clearly stated.

**3 POINTS** - There is confusion over what the control actually is. This usually happens when a pronoun is used.

**2 POINTS** – The answer is very vague.

**1 POINT** – One of the variables is given.

**0 POINTS** – No answer is given.

### **PROCEDURE (4 POINTS)**

**The only way that someone can duplicate your experiment, is if they know what you did!**

**4 POINTS** — All of the steps are clearly stated in complete sentences, and numbered.

**3 POINTS** — All of the steps are given, but they are written in fragments.

**2 POINTS** — One or two major step(s) is/are missing.

**1 POINTS** — You couldn't do the lab based on the information.

**0 POINTS** — No procedure is given.

### **RESULTS (4 POINTS)**

**In almost all cases this will be the data you collected during the lab.**

**4 POINTS** — All information is complete and neat. The proper labels are used in all cases.

**3 POINTS** — The data is complete but numbers weren't rounded to the proper place or labels were missing or incorrect.

**2 POINTS** — The data is incomplete and/or anything from "3 Points."

**1 POINT** — The data is incomplete and the work is messy.

**0 POINTS** — No results are submitted.

### GRAPH (4 POINTS)

**The graph is the major vehicle that scientists use to translate their data into a readable form. It is a picture of the results.**

**4 POINTS** — The proper graph is used. The X and Y axis are properly labeled and numbered. The graph has a title. There is a key or legend if it is needed. It is neatly drawn.

**3 POINTS** — The proper graph is used. One axis is not labeled or the title is missing. The X and Y axis are properly numbered. There is a key or legend if it is needed. It is neatly drawn.

**2 POINTS** — The proper graph is used. One additional ingredient from "3 Points" is missing.

**1 POINT** — The wrong graph is used. Or it was poorly drawn, and so much information is missing that it doesn't describe the results.

**0 POINTS** — No graph is submitted.

### CONCLUSION (4 POINTS)

**What did you discover? The conclusion must agree with the objective. It should be the answer to question. In addition you should mention two possible sources of error in the lab, and how you would correct them. Finally you should list two things you learned as a result of doing the lab.**

**4 POINTS** — You state a conclusion in a complete sentence, and it agrees with the objective. Two sources of error are given, and you list possible solutions. You describe two new things you learned as a result of doing the lab, and they aren't trivial.

**3 POINTS** — You state a conclusion. It agrees with the objective., but it isn't in a complete sentence. **OR** Two sources of error are given, and you don't list possible solutions. **OR You** describe two new things you learned as a result of doing the lab, and one or both are trivial.

**2 POINTS** — You state a conclusion, but it doesn't agree with the objective. Add in any other problem from "3 POINTS."

**1 POINT** — You state a conclusion but you fail to do all of the other components.

**0 POINTS** — No conclusion is given.