

This rubric was created by Dannelle D. Stevens & Antonia Levi. (From their book: Introduction to Rubrics, 2005).

Rubric for Conducting an Experiment in the Lab

Task Description: Conduct the assigned lab using the procedures and methods described below. Turn in your laboratory report at the beginning of the next class period.

	Exemplary	Competent	Needs Work
Materials	All materials needed are present and entered on the lab report. The materials are appropriate for the procedure. The student is not wasteful of the materials.	All materials needed are present, but not all are entered on the lab report, or some materials are absent and must be obtained during the procedure. The materials are appropriate for the procedure.	All materials needed are not present and are not entered on the lab report. The materials are not all appropriate for the procedure or there are some major omissions.
Procedure	The procedure is well designed and allows control of all variables selected. All stages of the procedure are entered on the lab report.	The procedure could be more efficiently designed, but it allows control of all variables selected. Most stages of the procedure are entered on the lab report.	The procedure does not allow control of all variables selected. Many stages of the procedure are not entered on the lab report.
96 Courtesy and safety	While conducting the procedure, the student is tidy, respectful of others, mindful of safety, and leaves the area clean.	While conducting the procedure, the student is mostly tidy, sometimes respectful of others, sometimes mindful of safety, and leaves the area clean only after being reminded.	While conducting the procedure, the student is untidy, not respectful of others, not mindful of safety, and leaves the area messy even after being reminded.
Purpose	Research question and hypothesis are stated clearly, and the relationship between the two is clear. The variables are selected.	Research question and hypothesis are stated, but one or both are not as clear as they might be, or the relationship between the two is unclear. The variables are selected	Research question and hypothesis are not stated clearly, and the relationship between the two is unclear or absent. The variables are not selected

Figure 7.1 Science laboratory rubric. Three-level rubric for conducting an experiment in a science laboratory.

(1)

	Exemplary	Competent	Needs Work
Data collection	Raw data, including units, are recorded in a way that is appropriate and clear. The title of the data table is included.	Raw data, including units, are recorded although not as clearly or appropriately as they might be. The title of the data table is included.	Raw data, including units, are not recorded in a way that is appropriate and clear. The title of the data table is not included.
Data analysis	Data are presented in ways (charts, tables, graphs) that best facilitate understanding and interpretation. Error analysis is included.	Data are presented in ways (charts, tables, graphs) that can be understood and interpreted, although not as clearly as they might be. Error analysis is included.	Data are presented in ways (charts, tables, graphs) that are very unclear. Error analysis is not included.
Evaluation of experiment	The results are fully interpreted and compared with literature values. The limitations and weaknesses are discussed and suggestions are made as to how to limit or eliminate them.	The results are interpreted and compared with literature values, but not as fully as they might be. The limitations and weaknesses are discussed, but few or no suggestions are made as to how to limit or eliminate them.	The results are not interpreted in a logical way or compared with literature values. The limitations and weaknesses are not discussed, nor are suggestions made as to how to limit or eliminate them.

Figure 7.1 Continued

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