**Beat the Heat lab report rubric** (modified from Thomas 2010)

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| **3: Excellent** | **2: Very good** | **1: Satisfactory** | **0: Unacceptable/Redo** |
| Element complete; minor error and/or interpretation | Element complete; a few minor errors and/or interpretations | Element incomplete or includes major errors and/or misinterpretations | Element missing or major errors and/or misinterpretations |
| **Element Possible points****Problem/investigative question \_\_ 6**\_\_\_ The problem statement relates/aligns to the bigger lab question.\_\_\_The dependent and independent variables (DV and IV) describe a cause-and-effect relationship.**Hypothesis \_\_\_ 6**\_\_\_The hypothesis predicts a measurable outcome of the problem statement.\_\_\_The DV and IV describe a cause-and-effect relationship.**Experimental design 30***List of variables and materials*\_\_\_Lists the variables, including the IV, DV, and all variables held constant\_\_\_Lists the choice of materials to test the problem/hypothesis*Safety procedures*\_\_\_The safety procedures explain ways to reduce risk of injury when conducting the experiment.*Experimental procedures*\_\_\_The experimental procedures test the problem/hypothesis.\_\_\_The procedures follow an orderly sequence that is easy to follow and implement.\_\_\_The IV is measured accurately to test the problem/hypothesis.\_\_\_The DV is measured accurately to test the problem/hypothesis.\_\_\_All variables held constant are identified (listed) to improve the validity of the experiment.\_\_\_All variables are measured in the metric system.*Clean-up procedures*\_\_\_The cleanup procedures describe strategies to safely put away/store all lab materials. | **Element Possible points****Data table and graphs \_\_\_ 21**\_\_\_ A data table organizes and presents the data from the experiment so it is easy to read and interpret.*Graph(s)*\_\_\_Correct type of graph is used (e. line, bar).\_\_\_The title describes the relationship between the IV and DV.\_\_\_Descriptive labels are included on both the *x* and *y* axes.\_\_\_Appropriate metric units are described on both the *x* and *y* axes.\_\_\_Even spacing and appropriate range are used on both the *x* and *y* axes.\_\_\_Data are organized and accurately plotted.**Results/findings \_\_\_ 36**\_\_\_ × 3\_\_\_ A complete discussion of the results is included.\_\_\_ × 3\_\_\_ Conclusions are drawn from the results, answer the problem, and evaluate the hypotheses.\_\_\_ × 3 \_\_\_Conclusions are elaborated upon by making inferences/possible explanations to explain the results.\_\_\_ × 3\_\_\_ The validity of the experiment is evaluated (e.g., procedures, measurements, variables held constant) and recommendations are made for improvements.**Other \_\_\_ 1**\_\_\_ Lab report is typed, organized, neat, and includes names of the lab partners. **Total possible points: 100** **Total points earned: \_\_\_\_****Comments:** |

Reference

Thomas, J.D. 2010. Getting students to be successful, independent investigators. *Science Scope* 33 (6): 24–31.