**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.