2015 Summer Assessment Institute, Rubrics

DRAFT Rubric for Biodiversity and Evolution Lab Reports

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Criteria | Exemplary | Proficient | Developing | Not Addressed |
| **POINTS** | **3** | **2** | **1** | **0** |
| **Title, authorship** | |  |  |  |
|  | Title is concise and clearly conveys the purpose of the research | Title | Title is same as lab manual exercise | No title |
|  | Authors name provided |  |  | No name on paper |
| **Introduction** |  |  |  |  |
| Background | Background is provided that clearly explains the importance of research and defines the central concept | Background relevant, but not clearly described or definition not clear | Information provided was related to project, but not relevant OR definition with errors | No background provided |
| Purpose | Clear description of purpose; student clearly understood why we did the experiment | Purpose had to be inferred, not clearly stated | Purpose misunderstood | No attempt to define purpose |
| Hypothesis | A hypothesis is clearly stated and testable with the data collected | Hypothesis provided but not clear or not testable in this lab | Hypothesis had to be inferred | No hypothesis |
| Predictions | Predictions are clearly stated, measurable by study, and appropriate for testing hypothesis | Predictions alluded to but not clearly stated | Predictions not clearly following from hypothesis or not testable | No predictions |
| **Materials and Methods** | |  |  |  |
| Materials | All materials are listed accurately | Important materials are left out | Materials used are mentioned, but poorly identified or list far from complete | No attempt to provide list of materials |
| Setting | Date, persons involved, location are provided | One-two important items missing | Setting inaccurate or poorly described | No setting for research |
| Procedure | Sufficiently clear and precise that another person could replicate your work | Procedure missing some elements OR overly wordy; can’t tell what is most important | Minimal effort at describing procedure | No description of procedure |
| Data Collection | Data collected is clearly defined, with units. | Data is listed, but it is not clear which data is most important; units not given | Most important data not included | Data not described |
| Data Analysis | Data analysis described accurately, including formulae and units as appropriate | Minor problems with description of data analysis. | Data analysis mentioned, but important equations/formulae not given | Data analysis not mentioned |
| **Results** |  |  |  |  |
| Graphs and Tables | Graphs and tables are as requested, clear, and include all appropriate labels | Minor issues with labelling, but otherwise clear and usable | Graphs/tables provided are not readily comprehensible, or not as requested; raw data or irrelevant data is provided | Important data missing |
|  | Tables/figures are accurately titled (e.g. Figure 1. Relationship Between Tail Length and Hair Color in Mice), and referred to accurately in text. | Minor mistakes in titling and numbering; not distracting |  | Tables/figures not labelled or not referred to in text |
| Narrative | Clear description of results is written in narrative form | Text lists tables but does not describe trends | Text provided but does not describe data. | No text |
| **Discussion** |  |  |  |  |
| Conclusion | Logical connection made between hypothesis, results, and conclusion | Conclusions related to hypothesis, but could be more clear | Conclusions not directly related to hypothesis | No attempt at interpretation of results |
| Linking Ideas | Student refers back to hypothesis and makes accurate assessment of whether it was supported or rejected. | Student refers to hypothesis, accurately assesses whether it was supported, but uses inappropriate terminology, e.g. “prove/proven,” “true,” “wrong” | Reference to hypothesis must be inferred or conclusions have little basis in data provided | No reference to hypothesis; no conclusions drawn |
| Evaluation of techniques | Techniques were evaluated thoughtfully and appropriate improvements suggested | Some evaluation of techniques, but suggestions not provided or not practical |  | No analysis of techniques |
| **Literature Cited** |  |  |  |  |
|  | References are appropriate and accurately cited in text and LC. | References are given in text and LC with format issues | Reference material either not identified in text of LC | Reference material not cited, or no required references included |
| **Style** |  |  |  |  |
|  | All material in appropriate sections; clear organization | One or two errors in sections | Sections not labelled, or frequent errors in placement | Not in scientific format |
|  | Writing is clear and concise | Writing mostly clear, could have been more concise | No apparent attempt at eliminating unnecessary text | Writing often difficult to understand and not apparently edited |
|  | Appearance is neat, readable, and professional | Minor issues with overall appearance | Appearance detracts from readers’ ability to understand paper | Major problems, e.g. printer, justification, or missing pages. Paper cannot be graded as submitted. |
|  | Care taken with proofreading; no errors in spelling or grammar | Some errors in spelling/grammar; not a distraction | Errors in spelling and grammar sufficient to inhibit/slow reading of paper | Frequent errors in spelling and grammar that make paper difficult to understand; please consult with Writing Center |