USF Sarasota-Manatee

Assessment Scoring Rubric for Student Learning Outcomes

B.S. in Biology

Outcome 3 Demonstrate the ability to engage in the scientific process through the planning, execution, and interpretation of laboratory or field studies.

SCORING SCALE	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10
1 Far less than expectations: *Does not identify significant research question(s) and/or does not provide appropriate hypothesis(es). Methods used are not appropriate for the posed question(s). Methodological approaches are not clearly explained or analytical software/source of data not clearly provided. Interpretation/explanation of results lacking or ineffective. Figures and tables of poor quality or do not clearly summarize the results. Does not identify short-comings of the methodological approaches used nor additional avenues of research to pursue in-light of research results.*										
2 Less than expectations: *Shows improvements on some criteria when compared to "Far less than expectations" score; however, in general terms, paper still fails to meet most of the criteria as set forth in the "Meet expectations" section*										
3 Meets expectations: *Identifies significant research question(s) and provides appropriate hypothesis(es). Methods used are appropriate for the posed question(s). Includes a detailed explanation of all methodological approaches, though some specific details and/or justification may be absent. Most relevant results are adequately explained, though some secondary findings are absent/poorly explained. Figures and tables that summarize the results are of acceptable quality. Identifies short-comings of the methodological approaches used and some additional avenues of research to pursue in-light of research results, though detail may be lacking.*										
4 Exceeds expectations: *Clearly identifies significant research question(s) and provides appropriate hypothesis(es). Methods used are appropriate for the posed question(s). Includes a detailed explanation of all methodological approaches, including names of analytical software used as well as source of data. Selection of methods justified in paper. Provided an accurate and in-depth interpretation/explanation of results, as well as figures and tables of excellent quality that summarize the results. Identifies short-comings of the methodological approaches used and additional avenues of research to pursue in-light of research results.*										

OUTCOME 5 Critical Thinking: Demonstrate critical thinking in both qualitative and quantitative analysis and evaluation of scientific information.

SCORING SCALE	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10
1 Far less than expectations: *The paper does not identify significant question(s)/topic(s) and does not provides relevant reasoning/ explanation for why it is important. Fails to support assertions using precise and relevant quotes, theories, statistics, research or other careful analytic processes of appropriate depth and breadth. Approach taken not clearly explained, or inherent assumptions and biases not considered/explained. Does not establish the relevance of the approach nor discusses resulting implications. Conclusions reached are not based on clear logic nor accurate information. Presents in written or oral format that lacks a clear line of reasoning or one that is disorganized, incomplete, poorly-thought out, and/or inconsistent with disciplinary standards.*										
2 Less than expectations: *Shows improvements on some criteria when compared to "Far less than expectations" score; however, in general terms, paper still fails to meet most of the criteria as set forth in the "Meet expectations" section*										
3 Meets expectations: *Clearly identifies significant question(s)/ topic(s) and provides relevant reasoning/ explanation for why it is important. Supports assertions using precise and relevant quotes, theories, statistics, research or other careful analytic processes of appropriate depth and breadth. Identifies the approach taken, noting the inherent assumptions and any biases (fairness). Establishes the relevance of the approach and discusses resulting implications. Clear logic is provided, based on accurate information, in support of conclusions, recommendations, or solutions. Presents in written or oral format a clear line of reasoning that is organized, complete, well-thought out, and consistent with disciplinary standards.*										
4 Exceeds expectations: *Excels in all the criteria described above. Ties topic/findings to current issues/events in Biology/society/sciences in general. Provides well thought-out avenues of future research that would improve the research already carried out.*										

OUTCOME 6 Communication: Demonstrate oral and written skills in the assembly and presentation of scientific reports on biological investigations.

When scoring this section, please consider that students were asked to follow the author guidelines for the journal Evolution (see here: http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1558-5646/homepage/ForAuthors.html). Students were not asked to provide an abstract for their report.

SCORING SCALE	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10
1 Far less than expectations: *The paper's organization, lay-out, content, and writing style show inadequate writing skills, or a fundamental lack of knowledge of a journal style article; or academic dishonesty has been demonstrated through plagiarism (e.g., failure to cite sources when using direct quotes or paraphrasing, copying another work).*										
2 Less than expectations: *The paper's organization, lay-out, content, and writing style demonstrate basic writing skills and basic knowledge of a journal style article. However the student makes many stylistic errors; or the paper is low in readability, clarity, and flow; or the paper lacks appropriate professionalism.*										
3 Meets expectations: *The paper's organization, lay-out, content, and writing style demonstrate adequate writing skills and adequate knowledge of a journal style article; the paper includes few stylistic errors and shows good readability, clarity, and flow. The paper is written with an appropriate level of professionalism.*										
4 Exceeds expectations: *The paper's organization, lay-out, content, and writing style demonstrate good writing skills and good knowledge of a journal style article. The paper includes virtually no stylistic errors, is high in readability, clarity, and flow. The paper is written with a high level of professionalism.*										