**BIOLOGY Graduate Student oral communication skills rubric**

**(Scale of 1-5, where 5 is the highest)**

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| **SCORE** | **HYPOTHESIS AND/OR STATEMENT OF**  **PROBLEM** | **METHODS AND**  **CONTROLS/COMPARISON** | **RESULTS** | **CONCLUSION AND FUTURE WORK** |
| **1** | • The hypothesis/statement of problem was  inappropriate or was missing  • Little or no background information was  included or connected  • Goal of project was not stated | • Methods section missing  • Serious lack of controls of discussion of controls | • Results are not yet available or  reproducible  • Presentation of data was missing | • Conclusions were missing  • There was no connection with the hypothesis |
| **2** | • A questionable hypothesis/ statement of  problem was presented and was not necessarily supported  • Some relevant background information was included, but not connected  • Goal of project was not clear | • No discussion of choice of  methods  • Controls or comparative groups not  adequately described; some appropriate controls or groups were missing | • Some data were lacking not fully  sufficient to address the hypothesis  • Presentation of data was included, but unclear or difficult to comprehend | • Conclusions were given  • Little connection with the hypothesis was apparent |
| **3** | • A questionable hypothesis/ statement of  problem was presented  • Background information was relevant, but connections were not made  • Goal of project was stated understandably | • Little comment on why the  methods were chosen and others  not chosen  • Adequate discussion of controls or  comparative groups; some significant controls or comparative groups were lacking | • Adequate amounts of  reasonably good data were  presented to address the hypothesis  • Presentation of data was not entirely clear | • Reasonable conclusions were  given  • Conclusions were not compared to the hypothesis and their relevance was not discussed |
| **4** | • A logical hypothesis/statement of problem  was presented  • Background information was relevant, but connections were not clear  • Goal of project was stated clearly; showed  relevance beyond project | • Good explanation of choice of  methods  • Clear discussion of controls or comparative groups; most controls or comparative groups were included | • Sufficient amounts of good data  were presented to address the  hypothesis  • Presentation of data was clear and logical | • Reasonable conclusions were  given and supported with  evidence  • Conclusions were compared to hypothesis, but their relevance  was not discussed |
| **5** | A logical hypothesis/statement of problem  was presented clearly  Background information was  relevant and summarized well. Connections to previous literature and broader issues were clear  • Goal of project was stated  clearly and concisely; showed clear  relevance beyond project | • Thorough explanation of why  particular methods were chosen  • Clear discussion of controls or  comparative groups; all appropriate controls or comparative groups were included | • Substantial amounts of high  quality data were presented sufficient to address the hypothesis  • Presentation of data was clear, thorough, and logical | • Reasonable conclusions were  given and strongly supported with evidence  • Conclusions were compared to hypothesis and their relevance in a wider context was discussed |

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| **SCORE** | **OVERALL PRESENTATION & HANDLING**  **QUESTIONS** | **POSTER BOARD OR POWERPOINT PRESENTATION** | **UNDERSTANDING INTERDISCIPLINARY SCIENCES**  **(OPTIONAL)** |
| **1** | • Does not demonstrate any knowledge of the research project  • Reads from the poster (slide or script)  all the time  • Does not use the available visual aid to enhance presentation  • Does not understand questions  • Presentation is very confusing | • Some of the expected components are present, but poorly laid out and confusing to follow in the absence of the presenter.  • The text is hard to read, messy and illegible, and contains multiple spelling or typographical errors very poor background  • The figures and tables are poorly done  • Visual aids are not used | Student views the problem or research question from a single discipline:  • Methods developed within a single discipline  • Analyses commonly used within a single discipline  • Discovery results from knowledge within a discipline  • Discovery advances a single discipline  • Discovery impacts a single discipline |
| **2** | • Demonstrates a poor knowledge of the research project  • Reads from the poster (slide or script)  most of the time  • Does not use the available visual aid to enhance presentation effectively  • Has difficulty answering questions  • Presentation is unclear | • Some of the expected components are present, but layout is untidy and confusing to follow in the absence of the presenter  • The text is hard to read due to font size or color and inconsistently free of spelling or typographical errors; the background may be distracting  • The figures and tables are not related to the text, or are not appropriate, or are poorly labeled  • Photographs/tables/graphs are limited and do not improve understanding of the project | Student views the problem or research question from another discipline:  • Methods developed in another discipline, but commonly used in your discipline  • Analyses developed in another discipline, but commonly used in your discipline  • Discovery results from knowledge within a discipline, but influenced by different discipline  • Discovery advances a single discipline, but broader influence is recognized  • Discovery impacts a single discipline, but broader influence is recognized |
| **3** | • Demonstrates some knowledge of the research project  • Reads from the poster (slide or script)  some of the time  • Uses some visual aids to enhance the presentation  • Has some difficulty answering challenging questions  • Presentation is generally unclear and inconsistent | • Most of the expected components are present, but layout is confusing to follow in the absence of presenter  • The text is relatively clear and legible, but inconsistently free of spelling or typographical errors; the background may be distracting  • The figures and tables are not always related to the text, or appropriate, or are labeled incorrectly  • Photographs/table/graphs do not improve understanding | Student connects the problem or research question using more than one  established discipline:  • Methods developed in another established discipline but connected to your discipline  • Analyses developed in another established discipline but connected to your discipline  • Discovery results from knowledge connecting more than established discipline  • Discovery connects more than one established discipline  • Discovery impacts more than one established discipline |
| **4** | • Demonstrates a good knowledge of the research project  • Speaks clearly and naturally; makes eye contact  • Uses visual aids to enhance the presentation  • Answers most questions  • Presentation is clear for the most part, but not consistently | • All expected components are present, but layout is crowded or jumbled and somewhat confusing to follow in the absence of presenter  • The text is relatively clear, legible, and mostly free of spelling or typographical errors; the background is unobtrusive  • Most of the figures and tables are appropriate and labeled correctly  • Photographs/tables/graphs improve understanding | Student integrates the problem or research question from more than one  discipline:  • Methods developed in more than one discipline are integrated  • Analyses developed in more than one discipline are integrated  • Discovery results from knowledge integrated from more than one discipline  • Discovery integrates more than one discipline  • Discovery impacts more than one discipline |
| **5** | • Demonstrates a very strong knowledge of the research project  • Speaks clearly, naturally and with enthusiasm; makes eye contact  • Comfortably uses visual aids to enhance presentation  • Answers difficult questions clearly and succinctly  • Presentation is consistently clear and logical | • All expected components are present, clearly laid out, and easy to follow in the absence of presenter  • The text is concise, legible, and consistently free of spelling or typographical errors; the background is unobtrusive  • The figures and tables are appropriate and consistently labeled correctly  • Photographs/tables/graphs improve understanding and enhance the visual appeal | Student uses more than one discipline to radically changes understanding of  an important or existing concept or practice or to provide pathways to new  frontiers:  • Methods using more than one discipline are novel  • Analyses using more than one discipline are new  • Discovery results from knowledge in more than one discipline transforming that discipline  • Discovery integrates more than one discipline creating a new discipline  • Discovery impacts more than one discipline by creating a new paradigm or frontier |