### Judging Rubric for Poster Presentation of STEM Research

*adapted from the rubric developed by the American Society for Microbiology and the Committee for the Annual Biomedical Research Conference for Minority Students (ABRCMS)*.

<table>
<thead>
<tr>
<th>Score</th>
<th>5 (Excellent)</th>
<th>4 (Very Good)</th>
<th>3 (Good)</th>
<th>2 (Fair)</th>
<th>1 (Poor)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis/Goals and Background</td>
<td>• <strong>Background information</strong> was relevant and summarized well. Connections to previous literature and broader issues were clear. • Project had a <strong>goal or a logical hypothesis</strong> that was stated clearly and concisely; showed clear relevance. • <strong>Broader impacts</strong> beyond project clearly stated.</td>
<td>• Background information was relevant, but connections were not clear. • A project goal or a logical hypothesis was presented and was reasonably clear and concise. • Broader impacts beyond project were present.</td>
<td>• Background information was relevant, but connections were not made. • Questionable project goal or hypothesis was presented. • Broader impacts beyond project were unclear.</td>
<td>• Little background information was included or connected. • Questionable hypothesis was presented and was not well supported or the goal of the project was unclear. • Broader impacts beyond project were absent.</td>
<td>• Background information was absent. • Hypothesis or goal was inappropriate or not stated. • Broader impacts beyond project were absent.</td>
</tr>
<tr>
<td>Experimental Logic</td>
<td>• Excellent choice of <strong>experimental methods</strong> to address hypothesis or project goals. • Excellent <strong>original thinking or innovation of technique</strong>. • Clear discussion of controls or comparative groups: all appropriate controls or comparative groups were included.</td>
<td>• Very good choice of experimental methods to address hypothesis or project goals. • Very good original thinking. • Clear discussion of controls or comparative groups; most controls or comparative groups were included.</td>
<td>• Good choice of experimental methods to address hypothesis or project goals. • Good original thinking. • Adequate discussion of controls or comparative groups; some significant controls or comparative groups were lacking.</td>
<td>• Experimental methods not appropriate to address hypothesis or project goals. • No original thinking. • Controls or comparative groups not adequately described; some controls or comparative groups missing.</td>
<td>• Experimental methods section missing. • No original thinking. • Serious lack of controls or discussion of controls.</td>
</tr>
<tr>
<td>Results</td>
<td>• Substantial amounts of high quality <strong>data</strong> were presented sufficient to address hypothesis or project goals. • <strong>Presentation of data</strong> was clear, thorough, and logical.</td>
<td>• Substantial amounts of good data were presented sufficient to address hypothesis or project goals. • Presentation of data was clear and logical.</td>
<td>• Adequate amounts of reasonably good data were presented to address hypothesis or project goals. • Presentation of data was not entirely clear.</td>
<td>• Some data were lacking, or not fully sufficient to address hypothesis or project goals. • Presentation of data was included, but unclear or difficult to comprehend.</td>
<td>• Results are not yet available or reproducible. • Presentation of data was missing.</td>
</tr>
<tr>
<td>Conclusions and Future Work</td>
<td>• Reasonable <strong>conclusions</strong> were given and were strongly supported with evidence. • <strong>Conclusions were connected</strong> to project goals or hypothesis and their relevance in a wider context was discussed.</td>
<td>• Reasonable conclusions were given and were supported with evidence. • Conclusions were connected to project goals or hypothesis but their relevance was not discussed.</td>
<td>• Reasonable conclusions were given. • Conclusions were not compared to project goals or hypothesis and their relevance was not discussed.</td>
<td>• Conclusions were given. • Little connection of conclusions to project goals or hypothesis was apparent.</td>
<td>• Conclusions were missing. • Conclusions were not connected to the project goals or hypothesis.</td>
</tr>
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<td>Score</td>
<td>5 (Excellent)</td>
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</table>
| **Poster Board** | • All expected **components** are present, clearly laid out, and easy to follow in absence of presenter.  
  • **Text** is concise, free of spelling or typographical errors; background is unobtrusive.  
  • **Figures and tables** are appropriate and labeled correctly.  
  • Photographs/tables/graphs **improve understanding** and **enhance visual appeal**. | • All components are present, but layout is crowded or confusing to follow in absence of presenter.  
  • Text is relatively clear, mostly free of spelling and typographical errors; background is unobtrusive.  
  • Most figures and tables are appropriate and labeled correctly.  
  • Photographs/tables/graphs improve understanding. | • Most expected components are present, but layout is confusing to follow in absence of presenter.  
  • Text is relatively clear, but some spelling and typographical errors; background may be distracting.  
  • Figures and tables not always related to text, or are not appropriate, and/or are poorly labeled.  
  • Photographs/tables/graphs limited and do not improve understanding. | • Some expected components are present, but layout is untidy and confusing to follow in absence of presenter.  
  • Text is hard to read due to font size or color, some spelling and typographical errors; background may be distracting.  
  • Figures and tables not related to text, or are not appropriate, and/or are poorly labeled.  
  • Photographs/tables/graphs limited and do not improve understanding. | • Some expected components are present, but poorly laid out and confusing to follow in absence of presenter.  
  • Text is hard to read, messy and contains multiple spelling and typographical errors; very poor background.  
  • Figures and tables are poorly done.  
  • Visual aids not used. |
| **Knowledge of Project: Ability to Answer Questions** | • Presenter **clearly states what is to be discussed**.  
  • Entire talk is organized around defined goals and has **smooth transition** between sections.  
  • Concluding portion of talk **re-emphasizes the goals and what was learned**.  
  • Presenter answers difficult **questions** clearly and succinctly. | • Presenter clearly states what is to be discussed.  
  • Entire talk is organized around defined goals and has smooth transition between sections.  
  • Concluding portion of talk re-emphasizes the goals and what was learned.  
  • Presenter answers most questions. | • Overall goals are not clear to the listener.  
  • Some sections of the talk are not clearly related and/or somewhat choppy transitions.  
  • Concluding portion of talk re-emphasizes the goals and what was learned.  
  • Presenter has some difficulty answering challenging questions. | • Overall goals are not apparent to the listener.  
  • Presentation moves off topic in a way that is not relevant or valuable.  
  • It was not possible to explain what was learned.  
  • Presenter has difficulty answering challenging questions. | • Overall goals are not apparent to the listener.  
  • Presentation moves off topic in a way that is not relevant or valuable.  
  • It was not possible to explain what was learned.  
  • Presenter does not understand questions. |