

REVISED RUBRIC 2021 for the Judging of Data Visualizations

S c o r e	Overall Impact of the Display (Poster Design) Poster design aspects, colors/patterns, grammar, spelling, dimensionality, readability, neatness	Formulate Statistical Investigative Questions: Statistical question that anticipates variability leads to productive investigations. (GAISE* – step 1)	Collect/Consider Data How useful are the data for answering the statistical investigative question? (GAISE* – step 2)	Appropriateness of the Data Visualization Visualizations address the investigative question	Creativity (Topic is of Interest) “who cares factor”
5	Poster uses colors/patterns well. Correct grammar and spelling are used. Poster is neatly constructed. Addresses multiple dimensions of the question or problem. Readable and neat. The overall display is eye-catching but retains statistical substance.	The variable(s) of interest are clear; the group or population that the question is focused on is clear; the intent of the question is clear. The question anticipates variability and clearly leads to a rich data collection process.	Data collection acknowledges variability in data. Clearly address questions about how the variables differ by type, the possible outcomes of each of the variables, and how the data were collected.	A reasonable number of visualizations (not text) support conclusion/answer to statistical question. Visualizations are correctly constructed and appropriate for the question asked and the data used.	Overall question is interesting, phrasing of titles, captions, and question is creative. Shows creative thought in topic, graph design, or data collection. Answers an important topic.
4	Better use of colors/patterns would help the presentation, but in general the poster grabs the attention of the viewer. Correct grammar and spelling are used. Addresses multiple dimensions of the question. Level of neatness and size of fonts do not detract from the message.	Lack of clarity on the question of interest. The intent of the question is not as clear as it can be, or group or population are not clearly defined. Question anticipates variability, but does not lead to rich data.	Minor issues with data interrogation.	Minor errors are present in at least one of the visualizations. More appropriate display(s) would improve the presentation. Conclusion has limited reliance on descriptive text.	Overall question is interesting. Some creativity in design or data collection.
3	Use of more or different colors/patterns, would vastly improve the appeal of the poster. Minor grammar and/or spelling mistakes. Addresses multiple dimensions of a question. Readability or neatness detract from the overall appeal of the poster.	Minor conceptual errors in statement of the statistical investigative question.	Addresses data interrogation but not with sufficient depth.	Significant gap exists in the demonstration of understanding of the visualizations, or how the visualizations relate to the statistical investigative question. Conclusion moderately relies on descriptive text.	Overall question is interesting. Some creativity.
2	Serious problems with colors/patterns, grammar, spelling, neatness, and/or organization prevent the poster from being eye-catching and understandable. Multiple dimensions of the question addressed.	Major conceptual errors in statement of the statistical investigative question. Do not anticipate variability.	Major misunderstanding of the data interrogation.	Substantial errors in the visualizations and lack of connection to question. Conclusion almost exclusively relies on descriptive text.	Minimal creativity. Topic is of minimal interest.
1	The poster isn't consistent with colors or patterns and has multiple grammar and/or spelling errors, so much so that it severely distracts from the poster. The poster is unidimensional. Major neatness or readability issues.	Not a statistical investigative question	No understanding of data interrogation demonstrated.	The displays are inappropriate and incorrect. Conclusion completely relies on descriptive text. Too many visualizations are provided.	The poster demonstrates little or no creativity.

Penalties: **Excessive Use of Space for Descriptive Text** >25% (excluding title block) deduct 2; > 50% deduct 4; >75% deduct 6.

Improper Poster Size: physical measurements not between 18 and 24 inches high and 24 and 30 inches wide or exceeds 1 digital page/sheet deduct 3;

* GAISE four-step investigative process: 1. Formulate Questions; 2. Collect Data; 3. Analyze Data; 4. Interpret Results ([GAISEII PreK-12 Full.pdf \(amstat.org\)](https://www.amstat.org/gaia/gaiaII/PreK-12/Full.pdf))