STL SCIENCE FAIR
Supporting the Advancement of Youth Scientists
A Program of the Academy of Science of St. Louis

Senior Honors Division
(R1) INTERVIEW - SCIENCE PROJECTS

Criteria	Category Weight	5 - Excellent	4 - Good	3 - Satisfactory	2 - Needs Improvement	1 - Poor
Research Question	x2	• Question is clear and focused • Clear identifiable contribution to the field of study • Testable using scientific methods	• Question is mostly clear and focused • Possible but incomplete contribution to field of study identified • Testable using scientific methods	• Question is generally clear. • Limited or unlikely contribution to the field of study identified. • Testable but large margin for error	• Question is vague or unclear. • Incomplete or inaccurate contribution to field of study identified. • Testability questionable.	• Question is unclear or unfocused • No clear contribution to the field of study. • Not testable.
Design & Methodology (15 pts)	x4	• Well-designed plan and data collection methods with no errors. • Appropriate variables and controls identified and defined	• Good design and data collection methods with minimal errors. • Appropriate variables and controls identified but not defined	• Adequate design and data collection methods with errors that do not impact understanding. • Most variables and controls defined, missing some.	• Adequate design and data collection methods with errors that impact understanding. • Some incorrect variables and controls identified.	• Inadequate or flawed design. • Variables and controls missing.
Execution: Data Collection, Analysis & Interpretation (15 pts)	x4	• Systematic data collection. • Reproducible results. • Correct and appropriate application of	• Mostly systematic data collection. • Reproducible results. • Correct but inappropriate application of	• Adequate data collection, with few examples of procedure not being used. • Aspects of the project are reproducible.	• Inconsistent data collection, usually following a procedure. • Limited reproducibility. • Mathematical/statistical methods are	• Inconsistent data collection, frequently not following a procedure. • Limited reproducibility

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		statistical/mathematical methods. • Sufficient data collected to support conclusions.	statistical/mathematical methods. • Data collected contained a significant number of outliers that supported conclusions.	• Mathematical/ Statistical methods are implemented without clear purpose. • Insufficient data collected to support conclusions.	used incorrectly to support conclusions. • Insufficient data collected to support conclusions.	• Mathematical/statistical methods are not used. • Insufficient data collected to • support conclusions.
Creativity & Potential Impact (10 pts)	x3	• Demonstrates significant creativity in project design or execution. • Clearly recognizes impact or potential impact in the field of study.	• Demonstrates moderate creativity in project design or execution. • Mostly recognizes impact or potential impact in the field of study.	• Some creativity attempted but not evident in final project design and execution. • Limited discussion of potential impact in the field of study.	• Minimal creativity in project design or execution. • Minimal recognition of impact or potential impact in the field of study.	• No creativity, product design and execution is a reproduction of existing experimental methods. • No recognition of impact in the field of study.
Presentation: Display (10 pts)	x2	• Project information is presented in a clear and logical way. • Graphs, charts, pictures, and labels are clear and helpful. • Supporting documents, visuals or models are relevant to the project and contribute to understanding.	• Project information is mostly logical and clear. • Most graphs, charts, pictures and labels make sense. • Supporting documents, visuals, or models are relevant to the project but do not contribute to understanding.	• Project information is adequately organized. • Some graphs, charts, pictures are missing labels. • Supporting documents, visuals, or models are somewhat relevant to the project and do not contribute to overall understanding.	• Project information is poorly organized or unclear. • Graphs, charts, pictures have unclear labels or are not connected to research. • Supporting documents, visuals, or models lack any relevance to the model and contract from overall understanding.	• Project information is disorganized, or has parts missing. • Labels display incorrect information. • Supporting documents, visuals, or models are not relevant to the project or the science.

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Presentation: Interview (25 pts)	x5	• Answers questions clearly showing a complete understanding of the science behind the project. • Explains the results, conclusions, and any limitations of the investigation. • Shows ownership of the work and can explain how the project was completed. *Acknowledgement given to any QS or RRI that assisted on the project.* • Explains why the project is important and who might benefit from it. • Shares thoughtful ideas for future research or improvements.	• Answers questions clearly showing a decent understanding of the science behind the project. • Explains the results, conclusions, but does not address the limitations of the investigation. • Shows ownership of the work and can explain how the project was completed. • Mostly explains why the project is important and who might benefit from it. • Shares ideas for how the project could be improved if repeated.	• Answers questions showing a moderate understanding of the science behind the project. • Explains the results but does not address the conclusions or limitations of the investigation. • Can explain how much of the project was completed. *<u>Acknowledgement NOT given</u> to any QS or RRI that assisted on the project.* • Explains why the project is important but not who might benefit from it. • Shares sources of experimental error instead of future directions for the project.	• Answers questions showing a basic understanding of the science behind the project. • Explains the data collected but not the results, conclusions or limitations of the investigation. • Can explain some of how the project was completed but with significant methodology gaps. • Incomplete explanation of why the project is important or who might benefit from it. • Shares sources of experimental error instead of future directions for the project.	• Answers questions showing a basic understanding of the general science behind the project. • Explains the data collected but not the results, conclusions or limitations of the investigation. • Explanation of how the project was completed contains gaps significant enough to interfere with understanding. • Incorrect explanation of why the project is important or who might benefit from it. • No discussion of future directions for research.

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