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

Junior Honors Division
INTERVIEW - MAKER PROJECTS

Criteria	Category Weight	5 - Excellent	4 - Good	3 - Satisfactory	2 - Needs Improvement	1 - Poor
Research Question (10 pts)	x2	• Clearly describes the problem or need to be solved. • Explains in detail what a successful solution should do. • Identifies limits or requirements that affect the design.	• Describes the problem or need to be solved with several errors that do not affect understanding. • Explains what a successful solution should do. • Identifies most of the limits or requirements that affect the design.	• Somewhat unclear or impractical description of the problem or need to be solved. • Unclear explanation of what a successful solution should do. • Identifies some limits or requirements that affect the design.	• Vague description of the problem or need to be solved. • Incomplete explanation of what a successful solution should do. • Incomplete description of limits or requirements that affect the design.	• Description of problem or need to be solved is unclear, unfocused, or missing. • No explanation of what a successful solution should do. • No description or incorrect description of limits or requirements that affect the design.
Design & Methodology (20 pts)	x4	• Clearly shows evidence of different ideas or possible solutions. • One solution/ design is chosen with a thorough justification as to why. • A prototype is built or a model is	• Some incomplete evidence of different ideas or possible solutions is evident. • One solution is identified with an unclear justification. • Prototype or model is developed but	• Images of different ideas or possible solutions unrelated to the final design chosen. • One solution is identified with no justification. • Prototype or model developed but missing details that	• Mention of previous designs or possible solutions without evidence. • One solution is unclearly identified. • Prototype or model incomplete.	• No exploration different ideas or possible solutions is found. • Prototype or model was not attempted.

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		developed to test the final design.	missing details that do not impact overall understanding.	impact understanding.		
Execution: Construction and Testing (20 pts)	x4	• Builds a prototype that matches the planned design. • Tests the prototype more than once or under different conditions. • Shows careful building, problem-solving, and attention to detail. • Sufficient data collected to support success of prototype	• Prototype mostly matches planned design. • Prototype is only tested once or is tested in similar conditions. • Shows careful building, problem-solving, and attention to detail. • Data collected contained a significant number of outliers that support the success of the prototype.	• Prototype made independently of planned design. • Limited testing is done on the prototype. • Prototype demonstrates basic engineering skills and some high problem-solving skills. • Insufficient data collected to support the success of the prototype.	• Prototype poorly matches planned design. • Minimal testing is done on the prototype. • Prototype demonstrates limited engineering skill with little problem solving skills. • Insufficient data collected to support the success of the prototype.	• Prototype does not match planned design. • No testing done on prototype. • Prototype does not show evidence of careful building.
Creativity & Potential Impact (15 pts)	x3	• Shows original ideas or creative problem-solving in the design solution. • Explains in detail how the project could help people, technology, the environment, or the community.	• Shows some original ideas or creative problem solving in the design solution. • Explains how the project could help people, technology, the environment, or the community.	• Some creativity attempted but not evident in the final design solution. • Limited discussion of how the project could help people, technology, the environment, or the community.	• Minimal creativity attempted but not evident in the final design solution. • Minimal discussion of how the project could help people, technology, the environment, or the community.	• No creativity shown in the final design. Design is an exact replica of existing design. • No recognition of how the project could help people, technology, the environment, or the community.

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Presentation: Display (10 pts)	x2	• Project information is presented in a clear and logical way. • Graphs, charts, pictures, and labels are clear and helpful.	• Project information is mostly logical and clear. • Most graphs, charts, pictures and labels make sense.	• Project information is adequately organized. • Some graphs, charts, pictures are missing labels.	• Project information is poorly organized or unclear. • Graphs, charts, pictures have unclear labels or are not connected to research.	• Project information is disorganized, or has parts missing. • Labels display incorrect information.
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	• 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. *Acknowledgement NOT given 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	• 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	• 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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		research or improvements.		directions for the project.	directions for the project.	

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