



# Louisville Regional Science & Engineering Fair

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## Judging Criteria For all Category Projects

### I. Research Question (for Science) or Research Problem (for Engineering): 10 points

<b>Science</b> <ul style="list-style-type: none"> <li>• Clear and focused purpose</li> <li>• Identifies contribution to field of study</li> <li>• Testable using scientific methods</li> </ul>	<b>Engineering</b> <ul style="list-style-type: none"> <li>• Description of a practical need or problem to be solved</li> <li>• Definition of criteria for proposed solution</li> <li>• Explanation of constraints</li> </ul>
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### II. Design and Methodology: 15 points

<b>Science</b> <ul style="list-style-type: none"> <li>• Well-designed plan and data collection methods</li> <li>• Variables and controls defined, appropriate and complete</li> </ul>	<b>Engineering</b> <ul style="list-style-type: none"> <li>• Exploration of alternatives to answer need or problem</li> <li>• Identification of a solution</li> <li>• Development of a prototype/model</li> </ul>
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### III. Execution: 20 points

<b>Science</b> <ul style="list-style-type: none"> <li>• Systematic data collection and analysis</li> <li>• Reproducibility of results</li> <li>• Appropriate application of mathematical and statistical methods</li> <li>• Sufficient data collected to support interpretation and conclusions</li> </ul>	<b>Engineering</b> <ul style="list-style-type: none"> <li>• Prototype demonstrates intended design</li> <li>• Prototype has been tested in multiple conditions/trials</li> <li>• Prototype demonstrates engineering skill and completeness</li> </ul>
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### IV. Creativity: 20 points

- Project demonstrates significant creativity in one or more of the above criteria

### V. Presentation: 35 points

- Poster (10 points)
  - Logical organization of material
  - Clarity of graphics and legends
  - Supporting documentation displayed
- Interview (25 points)
  - Clear, concise, thoughtful responses to questions
  - Understanding of basic science relevant to project
  - Understanding interpretation and limitations of results and conclusions
  - Degree of independence in conducting project
  - Recognition of potential impact in science, society and/or economics
  - Quality of ideas for further research
  - For team projects, contributions to and understanding of project by all members

*This judging criteria was adopted 2/10/2014.*