

## The OHIO ACADEMY of SCIENCE

### Science Day Judging Card – All Projects

Copyright © The Ohio Academy of Science 2021. All rights reserved. No edits or other modifications may be made in the judging criteria without the express written permission of The Ohio Academy of Science. Distribution and reproduction for educational purposes is permitted provided this notice is not removed. [The following space may be used for student’s name, space assignment, project title or other administrative information.]

**FOR TEAM PROJECTS: IN EACH OF THE FOUR SECTIONS OF THE JUDGING RUBRIC YOU MAY CONSIDER HOW TEAMWORK PLAYED A PART AND CONSIDER WHEN ASSIGNING POINTS. THERE IS NO SEPARATE JUDGING SECTION WITH POINTS FOR TEAMWORK.**

**Consider how group functioned as a team? Was a team effort used to complete this project?**

Did all members of the team show an understanding and active participation in the entire project?

All members of the team participate equally in the presentation of project; correctly and clearly answering questions.

<p><b>SECTION #1: ORAL, WRITTEN, AND VISUAL COMMUNICATION:</b>  <b>Tell me about your project? May I see your report?</b>  <i>Judges are encouraged to consider student abilities (or potential disabilities) in all three types of communication when assigning points</i></p>	Superior (Exceeds)	Excellent (Meets)	Good
<p><u>Written:</u> Well written Research Report (includes relevant background, research question and hypothesis showing how it is related to background, experimental design and procedures, data acquisition techniques, data analysis, conclusion, and references). If Engineering Design project, includes clear statement of technical problem and criteria for success</p>			
<p><u>Oral:</u> Correct and concise explanation of project, design, and analysis. Responses reflect correct understanding of experimental results and limitations of, expansions of, and/or impact of project.</p>			
<p><u>Visual:</u> Logical organization of material, neatly displayed, graphics and legends appropriate to project, easy to read and understand. Photos and graphics cited. Includes required information.</p>			
<p><b>Comments /Feedback – PLEASE ENTER INTO STEM Wizard</b></p> <p style="text-align: right;">                     SUPERIOR (9-10)                      EXCELLENT (6-7-8)                      GOOD (4-5)                      SATISFACTORY (0-3)                 </p>	<p><b>Points Earned:</b></p> <p style="font-size: 2em;">_____ /10</p>		
<p><b>SECTION #2: ORIGINALITY: <i>Where did you get the idea for your project, experiment design, and analysis? What interests you about this topic? Did you modify any designs that you found and if so, how?</i></b></p>	Superior (Exceeds)	Excellent (Meets)	Good
<p>Project displays originality in concept relative to grade level (i.e. not "cookbook", not classroom lab, not a simple extension of "found" idea) New idea, concept, principle, insight or non-obvious approach; Novel association or relationship of previous knowledge, particularly rigorous and exhaustive analyses that reveals previously unknown relations, etc.</p>			
<p>Evidence of student’s unique understanding and development of the project</p>			
<p><b>Comments /Feedback – PLEASE ENTER INTO STEM Wizard</b></p> <p style="text-align: right;">                     SUPERIOR (9-10)                      EXCELLENT (6-7-8)                      GOOD (4-5)                      SATISFACTORY (0-3)                 </p>	<p><b>Points Earned:</b></p> <p style="font-size: 2em;">_____ /10</p>		

<b>SECTION #3: EXPERIMENTAL DESIGN: <i>What question are you trying to answer and how did you decide to go about answering it? What did you learn from the data? IF ENGINEERING DESIGN: What design problem are you trying to address and how did you decide to go about addressing it?</i></b>	Superior (Exceeds)	Excellent (Meets)	Good
Project addresses a clear, focused problem or question with hypothesis that is testable using scientific methods. <i>If Meta-Analysis project, then hypothesis is testable using data from multiple peer-reviewed research papers. If Engineering Design project, addresses a clear, focused engineering design problem or need; criteria for success are identified; preliminary designs prepared; prototype is created and tested with results clearly communicated.</i>			
Well-designed plan and data collection methodology which identifies variables and controls. Grade appropriate control of variables (Not a summary of already known science) <i>If Engineering Design project, student identifies and applies established engineering principles in their design.</i>			
Reproducible and sufficient data are collected, <i>or if Meta-Analysis project, sufficient amount of scientific data is synthesized from other sources to address question/problem.</i> Data used were collected using appropriate scientific protocols. <i>If Engineering Design project, student used materials and processes effectively to correctly build prototype or model</i>			
Data are properly analyzed. Appropriate graphs illustrate the data. Statistics appropriate to the age of student are correctly used. <i>If Engineering Design project, sufficient testing of prototype or model is completed; data is properly measured, presented and analyzed.</i>			
Valid conclusions are reached from the data obtained. Age appropriate discussion of results. Sources of error identified. <i>If Engineering Design, prototype successfully meets criteria that were established for the project.</i>			
<b>Comments /Feedback – PLEASE ENTER INTO STEM Wizard</b>  <div style="text-align: right;"> <b>SUPERIOR (9-10)</b>  <b>EXCELLENT (6-7-8)</b>  <b>GOOD (4-5)</b>  <b>SATISFACTORY (0-3)</b> </div>	<b>Points Earned:</b>  <div style="text-align: center;"> <span style="font-size: 2em;">_____ /10</span> </div>		
<b>SECTION #4: DEPTH OF UNDERSTANDING: <i>What did you learn about the science behind your project before and during the experiment? If Engineering Design - What did you learn about the engineering and previous designs for your project before and during the process?</i></b>	Superior (Exceeds)	Excellent (Meets)	Good
Adequate age appropriate background research (journals, textbooks, websites, etc.) relevant to the project which provides basis for hypothesis.			
Supplements answers with relevant information reflecting knowledge gained during the project.			
Age appropriate use of terms and principles.			
Age appropriate exploration of science in subject, depth of investigation, and/or sophistication of project.			
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<b>Total Points Earned (completed by judges)</b>	<b>Overall Rank (CIRCLE)</b>
Section 1: _____ / 10 Section 2: _____ / 10 Section 3: _____ / 10 Section 4: _____ / 10  <b>Total: _____ / 40</b>	Superior (36 - 40) Excellent (24-35) Good (12-23) *Satisfactory (0-11)  <i>*Satisfactory rank is not used at State Science Day.</i>