

STEM Fair Judging Rubric

| Science Projects | Engineering Projects (may be applied to projects in mathematics and computer science) |
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| 1. Research Question (10 pts.) <ul style="list-style-type: none"> • Clear and focused purpose • Identifies contribution to field of study • Testable using scientific method | 1. Research Problem (10 pts.) <ul style="list-style-type: none"> • Description of a practical need or problem to be solved • Definition of criteria for proposed solution • Explanation of constraints |
| 2. Design and Methodology (15 pts.) <ul style="list-style-type: none"> • Well-designed plan and data collection methods • Variables and controls defined, appropriate and complete | 2. Design & Methodology (15 pts.) <ul style="list-style-type: none"> • Exploration of alternatives to answer need or problem • Identification of a solution • Development of a prototype/model |
| 3. Execution: Data collection, Analysis, & Interpretations (20 pts.) <ul style="list-style-type: none"> • Systematic data collection and analysis • Reproducibility of results • Sufficient data collected to support interpretation and conclusions | 3. Execution: Construction & Testing (20 pts.) <ul style="list-style-type: none"> • Prototype demonstrates intended design • Prototype had been tested in multiple conditions/trials • Prototype demonstrates engineering skill and completeness |
| 4. Creativity (20 pts.) <ul style="list-style-type: none"> • Project demonstrates significant creativity/originality/inventiveness in one or more of the above criteria | |
| 5. Presentation (35 pts.) <p><u>Tri-fold Poster</u> (10 pts.)</p> <ul style="list-style-type: none"> • Logical organization • Clarity of graphics and legends • Supporting documentation well selected and displayed <p><u>Interview</u> (25 pts.)</p> <ul style="list-style-type: none"> • Clear, concise, thoughtful responses to questions • Understanding of basic science relevant to project • Understanding of 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 is the rubric used by the International Science and Engineering Fair. It will be difficult for students K-5 to complete all these areas, but it is a good model for them to work towards.