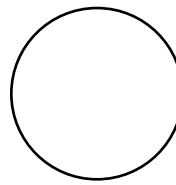


Judging Rubric

Project:



Total Score: _____

Pts.	Evaluation Criteria	Excellent 17-20 points	Good 13-16 points	Fair 9-12 points	Poor 0-8 points
20 score	Science Project: • Objectives	-- Clearly stated & well-written -- Appropriate for grade level & original -- Creative approach to problem solving	--Lacking in 1 area: clarity, appropriate level, or creativity	--Lacking in 2 areas: clarity, appropriate level, and/or creativity	--Poorly conceived or lacking in all 3 areas
	• Hypothesis (question)	I. Testable, clear, bounded hypothesis	I. Hypothesis present, but not completely testable	I. Hypothesis incomplete or not testable	I. Hypothesis missing or poorly defined
20 score	Engineering Project: • Problem Statement (design criteria)	A. Clear, original problem statement that meets potential users' needs B. Clearly defined design criteria and goals	A. Statement is not original B. Goals/criteria are measurable but vague	A. Incomplete statement B. Goals/criteria are poorly defined /not measurable	A. Statement missing or poorly defined B. Goals/criteria missing
	Science Project: • Design & Procedures Experimental design & implementation (hypothesis testing)	I. Exemplary, creative plan to support / refute hypothesis with valid testing II. Sequential experimental procedures are quantitatively and/or qualitatively listed, and connect hypothesis, data & results III. Procedures are logical and repeatable IV. Sample sizes, number of trials are sufficient. Valid control group. V. All other variables are carefully controlled	I. Sufficient plan to support / refute hypothesis with all other criteria met, or II. Exemplary plan and 3 of 4 other criteria for excellence met, or III. Some improvements needed throughout	I. Sufficient plan with 3 of 4 other criteria for excellence met, or II. Exemplary plan and 2 of 4 other criteria for excellence met, or III. Major improvements needed throughout	I. Sufficient plan with 1-2 of 4 other criteria for excellence met, or II. Plan information is unclear / missing / insufficient, or III. Criteria II-V are lacking or grossly deficient
20 score	Engineering Project: • Engineering process (design & prototype)	A. Design goals & approach clearly stated & reproducible, alternatives considered B. Design creative, schematics / software provided (as applicable), well labeled C. Assembly details or set-up instructions for device are clearly laid out D. Photos provided or prototype on display E. Materials used in appropriate ways	A. 3-4 of 5 criteria required for excellence are met or B. Some improvements could be made	A. 1-2 of 5 criteria required for excellence are met or B. Existing information is incomplete ,or needs major improvement	A. Description of design & implementation not included or inadequate to show how design works and/or if design meets requirements B. No engineering. Project was merely tinkering .
	Science Project: • Data & Results (experimentation)	I. Experiments run are appropriate for hypothesis being tested II. Sufficient data. Repetition of experiments III. Correct & appropriate statistical tests run	I. 2 of the 3 criteria for excellence met II. Some improvements could be made	I. 1 of the 3 criteria for excellence met II. Major improvements required	I. Incorrect experiments and data analysis for hypothesis II. Insufficient data
20 score	Engineering Project: • Problem Solution (testing and redesign)	A. Measures of performance/improvement have been made (including cost) B. Functionality is fully tested & validated C. Records on testing are included D. Prototype was redesigned or potential design improvements were identified	A. Final design works but has not been fully tested B. No advantage over original C. Some improvements could be made	A. Final design does not meet end user's needs B. No improvement over original C. Major improvements required	A. Little or no testing B. No records C. No redesigns
	Science Project: • Discussion & Conclusions	I. Status of the hypothesis is correctly and logically addressed, and stated in an unbiased manner (confirmed / refuted) II. Completeness of work and validity of conclusions are substantiated III. Discussion is insightful, demonstrates clear understanding of research project, broader subject & suggested new work	I. 2 of 3 criteria for excellence met, or II. Some improvements could be made	I. 1 of 3 criteria for excellence met or II. Overall information is lacking in quality and perspective	I. No discussion / conclusions provided
20 score	Engineering Project: • Evaluation	A. Significance, relevance, applications, utility, cost effectiveness, improvements, benefits and performance addressed	A. Some evaluation areas not addressed	A. Many evaluation areas not addressed	A. No evaluation areas addressed
	Science+Engineering : • Interview	Exemplary understanding... -- Research findings / design results -- Ability to interpret graphs, statistics, etc... -- Related background information -- Project rational, details & validity	Good understanding... -- Research findings -- Ability to interpret graphs, statistics, etc. -- Related background information	Fair understanding... -- Research findings -- Ability to interpret graphs, statistics, etc... -- Related background information	Poor understanding... -- Cannot answer questions adequately and precisely -- Does not incorporate display into interview -- Unfamiliar with related background information
20 score	• Display	Exemplary display... -- Creativity, clarity, logic, interpretability, construction, writing, graphics, grammar -- All information directly relates to project	Good display -- Most information is appropriate, organized and easily accessible.	Fair display ... -- Some information is appropriate, organized and easily accessible.	Poor display... -- Confusing, unorganized, incorrect or inappropriate information