

<b>Pts.</b>	<b>Evaluation Criteria</b>	<b>Excellent 12-14 points</b>	<b>Good 9-11 points</b>	<b>Average 6-8 points</b>	<b>Needs Improvement 5 or below</b>
____ score 14 possible	<b>1. Objectives / Requirements</b>  <b>Hypothesis (question)</b>  Or  <b>Problem Statement (invention / design goal)</b>	Applies to all projects... – Clearly stated & well-written – Appropriate for grade level & original  I. Testable, clear, bounded hypothesis  A. Creative in design concept to meet separately identified usage requirements	--Lacking in 1 area: clarity, appropriate level, and insight by student  I. Hypothesis present, but not completely testable  A. Problem / design statement present, but not original	--Lacking in 2 areas: clarity, appropriate level, and insight by student  I. Hypothesis incomplete or not testable  A. Incomplete problem / design statement	--Poorly conceived or lacking in all 3 areas: clarity, appropriate level, and insight by student  I. Hypothesis missing or poorly defined  A. Problem / design statement missing or poorly defined
____ score 14 possible	<b>2. Design &amp; Procedures</b>  <b>Scientific method in experimental design &amp; implementation (hypothesis testing)</b>  Or  <b>Engineering process in design of invention &amp; its implementation (fulfilling requirements)</b>	I. Exemplary plan to support / refute hypothesis with valid testing II. Sequential experimental procedures are quantitatively and/or qualitatively listed, and connect hypothesis, data & results III. Variables, controls, trials are sufficient IV. Procedures are logical and repeatable  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	I. Sufficient plan to support / refute hypothesis with all other criteria met, or II. Exemplary plan and 2 of 3 other criteria for excellence met, or III. Some improvements needed throughout  A. 3-4 of 5 criteria required for excellence are met, or some improvements could be made	I. Sufficient plan with 2 of 3 other criteria for excellence met, or II. Exemplary plan and 1 of 3 other criteria for excellence met, or III. Major improvements needed throughout  A. 1-2 of 5 criteria required for excellence are met, or existing information is incomplete, or needs major improvement	I. Sufficient plan with 1 of 3 other criteria for excellence met, or II. Plan information is unclear / missing / insufficient, or III. Non-plan criteria are lacking or untreated  A. Description of design & implementation not included or inadequate to show how design works and/or if design meets requirements
____ score 14 possible	<b>3. Data / Results</b>  <b>Experimentation (completeness &amp; documentation)</b>  Or  <b>Problem Solution (fulfilling requirements)</b>	I. Where possible, data are presented in graphs and/or tables II. Correct & appropriate data presentation III. Sufficient data to create confidence  A. Where possible graphs, tables or other data were used to evaluate & document invention design goals vs. requirements B. Functionality is fully tested & validated C. Records on testing are included D. Prototype was redesigned or potential design improvements were identified	I. 2 of the 3 criteria for excellence met or some improvements could be made  A. This information is sufficient but not outstanding (as per criteria for excellence)	I. 1 of the 3 criteria for excellence met or major improvements required  A. This information is deficient	I. Data were not presented in graphs & tables, or were improperly presented  A. This information is missing or improperly presented
____ score 14 possible	<b>4. Discussion / Conclusions</b>  <b>Experimentation (hypothesis supported or not)</b>  Or  <b>Problem Solution (usage value, potential)</b>	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  A. Applications... Significance, utility, cost effectiveness, value, practical applications identified, improvement directions clear	I. 2 of 3 criteria for excellence met, or some improvements could be made  A. Applications... Sufficiently addressed	I. 1 of 3 criteria for excellence met, or overall information is lacking in quality and perspective  A. Applications... Vaguely identified	I. No discussion / conclusions provided  A. No applications or needs addressed
____ score 14 possible	<b>5. Interview</b>  <b>How precisely are questions answered?</b>	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
<b>Pts.</b>	<b>Evaluation Criteria</b>	<b>Excellent 9-10 points</b>	<b>Good 7-8 points</b>	<b>Average 5-6 points</b>	<b>Needs Improvement 4 or below</b>
____ score 10 possible	<b>6. Display</b>	Exemplary... – Creativity, clarity, logic, interpretability, construction, writing, graphics, grammar	Good... – Creativity, clarity, etc...	Average effort... – Creativity, clarity, etc...	Inadequate display... – Creativity, clarity, etc...
____ score 10 possible	<b>7. Notebook</b>	– Clearly written, complete and clear – Goals & procedures are easy to follow – Comments included – Records include dates	– 3 of 4 standards for excellence were met, or some improvements could be made	– 2 of 4 standards for excellence were met, or major improvements required	– No notebook or 1 of the standards for excellence were met
____ Score 10 possible	<b>8. Use of Resources</b>	--A comprehensive, correctly formatted bibliography was included & footnotes are present in text of introduction & discussion – Acknowledgements, crediting individuals, businesses and/or educational / research institutions included (when necessary) – Student(s) used full resources available (e.g. labs, advisors, experts, periodicals, texts, reference literature, Internet)	Bibliography, acknowledgements... – Present – Formatted incorrectly – Incomplete bibliography	Bibliography, acknowledgements... – Minimal effort, requires improvement	Bibliography, acknowledgements... – None incorporated into the presentation