

Project #	Judges Initials:
Project Title:	

<p>Define A Problem Or Need The purpose is clearly and succinctly stated. It may be an improvement or a new design.</p>	<p>0=No need or problem is stated. 2=Poorly written Problem Statement or unclear focus. 4= Well-stated problem or need however approach to the design taken from a source. 6=Original and unique project that addresses or solves a real need and has a good approach. Clear logical objective that is succinctly stated.</p>	
<p>Design / Criteria Design criteria are requirements that the student specifies that will guide the development of the design.</p>	<p>0=No design criteria or specifications of design listed. 2=Poor design criteria or constraints outlined. 4=Minimal design criteria may be incomplete in scope or constraints. 6=Complete design criteria outlined, design is clear and constrains are clearly outlined.</p>	
<p>Prepare Preliminary Designs Does the student clearly understand the design that was developed and used? Does the student consider multiple solutions?</p>	<p>0=No initial design provided. 2=No iteration of the design process is considered and some sketches are evident. 4=Multiple iterations of the design solutions are considered. Sketches, models and dimensional drawings are shown. 6=Multiple solutions are generated and alternatives seriously considered. Criteria for rejecting alternatives are well stated and used. Quality sketches, models, and two-dimensional drawings are evident and their use is apparent.</p>	
<p>Build, Test And Retest A Prototype Students will need to test and retest their design noting any adjustments and making design changes as needed.</p>	<p>0=No test or prototype evident. 2=A prototype has been created yet tested only a minimal number of times. 4=The prototype has been tested multiple times however adjustments and changes are not made. 6=The prototype has been tested multiple times and adjustments and changes have been noted and logical corrections made.</p>	
<p>Analysis And Evaluation Of The Design To what degree does has the design been developed</p>	<p>0=No written narrative or analysis or evaluation. 2=Analysis of design may not be logical or may not mention the criteria used for success. 4=Analysis of the design solution is logical and there is some mention of economic and ecological feasibility. 6=Analysis is logical and there is good analysis of economical and ecological feasibility and or scale in the application of the design solution.</p>	
	<i>Subtotal front</i>	

<p>Notebook (s) Students write in their own words, (recognizable inventive spelling is acceptable). Includes original illustrations and thoughts.</p>	<p>0=Very little degree of originality and or complexity. 2=Some relevance to real world application but low degree of originality or complexity. 4=Some originality (changing a variable or two), or complexity, may or may not relate to real world yet not identified by the student. 6=A degree of originality, complexity, and has real world application to broader scientific principles and innovative. 8=Very innovative and original. Complexity and application to broader scientific principles is high.</p>	
<p>Display Attributes Attractive, clear, legible and in appropriate order. Workmanship on the design is thorough and attention to detail is noted.</p>	<p>0=Unsatisfactory display – attributes missing. 1=Poor quality of display with little attention to detail. 2=Average quality but board organization hinders communication. 3=Good quality – but the addition of more components would improve communication or layout hinders communication. 4=Superior display – layout and organization facilitates communication.</p>	
<p>Overall Quality To what degree does this project relate to broader scientific principles and real world applications, is original or has an innovative approach to the topic or shows a high degree of complexity.</p>	<p>0=Very little degree of originality and just building from found directions. 2=Some relevance to real world application but low degree of originality or complexity. 4=Some originality (changing a variable or two), or complexity, may relate to real world yet not identified by the student. 6=A degree of originality, complexity, and has real world application to broader scientific principles and innovative. 8=Very innovative and original. Complexity and application to broader scientific principles is high.</p>	
	<p><i>Subtotal back</i></p>	
	<p><i>TOTAL POINTS _____ / 50</i></p>	