

## **Engineering Project Judging Scorecard**

Student's Name:		Grade Level:						
Project Category:   Project Title:		Date: Project #:						
								Judge's Name:
		Superior	Above Avg.	Average	Below Avg.	No Evidence		
En	gineering Design Process (42 points)							
1.	Defined the engineering problem to be solved, identifying the need, the target user, and the justification. [Who] need(s) [what] because [why].	6	4.5	3	1.5	0		
2.	Accessed a minimum of three, age-appropriate sources for background research, addressing all important facets of the project. Studied and learned from existing solutions or attempted solutions as appropriate.	6	4.5	3	1.5	0		
3.	Specified design requirements that state the important characteristics the solution must meet to succeed. Kept the target user in mind when identifying the requirements.	6	4.5	3	1.5	0		
4.	Created alternative solutions to the problem.	6	4.5	3	1.5	0		
5.	Chose the best solution from the alternatives, justifying how the solution meets the design requirements. Outstanding students might use a decision matrix.	6	4.5	3	1.5	0		
6.	Developed the solution, refining and improving it during the construction of a prototype.	6	4.5	3	1.5	0		
7.	Used information collected during the testing of the prototype to improve the product. Redesigned and retested the product until the design goal and design requirements were met (e.g. through debugging, optimizing, etc.).	6	4.5	3	1.5	0		
Op	portunities for Improvement:							

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	Superior	Above Avg.	Average	Below Avg.	No Evidence
Product (40 points)					
8. In your experience, to what extent does the student's solution represent significant improvements over existing products/solutions? Is the product a creative solution to the problem?	12	9	6	3	0
9. To what extent does the final product meet universal design criteria, such as elegance, robustness, aesthetics, and cost effectiveness? Is the product safe to build, use, store, and dispose of?	12	9	6	3	0
10. To what extent is the final product useful to the target user? Does the project fill a meaningful need?	12	9	6	3	0
11. Bonus points for an overall superior project.	4	3	2	1	0
Presentation / Interview (18 points)					
12. To what extent does the student's presentation/interview communicate both the merits of the final product and the process that the student went through to reach that final product?	6	4.5	3	1.5	0
13. To what extent can the student communicate effectively about the project? Can the student provide cogent responses to questions? Can the student defend the design choices that s/he made?	6	4.5	3	1.5	0
<ul><li>14. Does the student's design notebook provide ample evidence of how the student used the engineering design process throughout the project?</li><li>Opportunities for Improvement:</li></ul>	6	4.5	3	1.5	0
Total Score:		/ 1	100		
General Comments/ Notes:					