

Rubric created by Kurt Lichtenwald and John Barry, Gloucester High School

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S.T.E.A.M. (Science, Technology, Engineering, Arts and Mathematics)

Musical Instrument Evaluation Rubric						
The 2 sections below are weighted heavier than the other criteria.	Excellent (20 -15 points)	Good (14 - 10 points)	Fair (9 - 6 points)	Undeveloped (5 - 3 points)	Non-Compliance (2- 0 points)	Grade Received (N/A)
Engineering Design	Project is elegant , and a complete system. All components work well together. All components are professionally incorporated.	Project is a complete system. All components work together. All components look like they belong together and are incorporated.	Project is nearly a complete system, but is missing some critical design components. Most components work well together.	Project is not a complete system and lacks many critical design components. Some components work well together.	Project was not finished or no project was presented for evaluation.	Grade Received
Creativity / Originality Cosmetic/Aesthetic Quality of Product	Excellent (20 -15 points)	Good (14-10 points)	Fair (9-6 points)	Undeveloped (5-3 points)	Non-Compliance (2-0 points)	Grade Received
	The student developed a product aesthetically worthy of sale in its niche market place.	The student developed a product for their own use aesthetically pleasing for themselves and not for sale in its niche market place.	The student made a valid attempt to the finishing process of the product.	The student gave little attention to the finishing process of the product but had minimum success.	The student gave little to no attention to the finishing process of the product.	
The 6 sections below are weighted less than the above criteria.						
Demonstrate Knowledge and Application of The Engineering Design Process	Excellent (10-8 points)	Good (7-5 points)	Fair (4-3 points)	Undeveloped (2-1 points)	Non-Compliance (0 points)	Grade Received
	Student is able to identify and given an In-depth explanation of the EDP in relation to their project. Student relies on their own memory skills to complete this task.	Student is able to identify and given an adequate explanation of the EDP in relation to their project. Student relies on their own memory skills to complete this task.	Student is able to identify and given a fair explanation (with minimal prompting) of the EDP in relation to their project. Student relies mostly on their own memory skills to complete this task.	Student needs extensive prompting from teacher and / or they need an EDP cycle worksheet to complete this task.	Student lacked interest in demonstrating knowledge of EDP cycle and / or project.	
Time Management / Student Preparedness	Excellent (10-8 points)	Good (7-5 points)	Fair (4-3 points)	Undeveloped (2-1 points)	Non-Compliance (0 points)	Grade Received
	Student gathered all materials and began production in a timely manner. Always demonstrated excellent time-management throughout the project to meet due dates.	Student gathered most materials and began production in a timely manner. Consistently demonstrated time-management throughout the project to meet due dates.	Student gathered most materials and began production in a timely manner. Inconsistently demonstrated time-management throughout the project to meet due dates.	Student did not gather needed materials to perform work. Was unable to adequately meet timeline due to inability.	Student refused to gather materials required to complete the project. Student showed no interest in completing project on time.	

Application of Safety Practices	<u>Excellent</u> <u>(10-8 points)</u> Student followed all safety rules and always demonstrated proper tool usage.	<u>Good</u> <u>(7-5 points)</u> Student followed all safety rules and demonstrated proper tool usage most of the time .	<u>Fair</u> <u>(4-3 points)</u> Student followed most of the safety rules and always demonstrated proper tool usage.	<u>Undeveloped</u> <u>(2-1 points)</u> Student followed most of the safety rules and inconsistently demonstrated proper tool usage.	<u>Non-Compliance</u> <u>(0 points)</u> Student did not follow safety rules, nor demonstrated proper tool usage.	<u>Grade Received</u>
Component Placement Design	<u>Excellent</u> <u>(10-8 points)</u> The project demonstrates well-thought out design for access to all of its components to allow for modifications and repairs.	<u>Good</u> <u>(7-5 points)</u> The project allows access to most of its components, thus allowing for some modifications and repairs.	<u>Fair</u> <u>(4-3 points)</u> The project allows access to some of its components, thus allowing for minimal modifications and repairs.	<u>Undeveloped</u> <u>(2-1 points)</u> The project does not allow access to its components for modifications and repairs.	<u>Non-Compliance</u> <u>(0 points)</u> Project was not finished or no project was presented for evaluation.	<u>Grade Received</u>
Homemade vs. Store - Bought build	<u>Excellent</u> <u>(10-8 points)</u> The student alters an existing products function into a new desired function , cross-application of an existing product, and fabrication; or a new product.	<u>Good</u> <u>(7-5 points)</u> The student applied both fabricated and prefabricated materials that served the desired purpose.	<u>Fair</u> <u>(4-3 points)</u> The student demonstrated knowledge of course material and used a majority of prefabricated materials .	<u>Undeveloped</u> <u>(2-1 points)</u> Materials were not suitable for desired outcome.	<u>Non-Compliance</u> <u>(0 points)</u> Project was not finished or no project was presented for evaluation.	<u>Grade Received</u>
Material Choice	<u>Excellent</u> <u>(10-8 points)</u> Recycled material and material that will last a minimum of 5 years of heavy use .	<u>Good</u> <u>(7-5 points)</u> Recycled material and material will likely last less than 5 years of heavy use .	<u>Fair</u> <u>(4-3 points)</u> Recycled material and material will likely last less than 5 years of sporadic use .	<u>Undeveloped</u> <u>(2-1 points)</u> Recycled material and material will likely last less than 5 years of minimal use .	<u>Non-Compliance</u> <u>(0 points)</u> No material was gathered.	<u>Grade Received</u>
Above and Beyond Points <u>Extra Credit - Bonus</u>	<u>Excellent</u> <u>(10-8 points)</u> Student exceeds rubric requirement for project and helps others with the development of peer's projects.	<u>Good</u> <u>(7-5 points)</u> Student does more than the required rubric for project.	<u>Fair</u> <u>(4-3 points)</u> Student attempted to do more than the required project.	<u>Undeveloped</u> N/A	<u>Non-Compliance</u> N/A	<u>Grade Received</u>

TOTAL GRADE FOR PROJECT: