

Topic		Criteria			Points
		Expert (4-5 points)	Proficient (2-3 points)	Emerging (0-1 points)	
Engineering Design Process	Identify game and robot design challenges and goals	<u>Identifies</u> the game challenge or robot design challenge <u>in detail at the start of each design process cycle</u> with words and pictures. States the goals for accomplishing the challenge.	Identifies the challenge at the start of each design cycle. <u>Lacking details in words, pictures, or goals.</u>	<u>Does not identify the challenge</u> at the start of each design cycle.	
	Brainstorm and diagram or prototype solutions	<u>Lists three or more possible solutions</u> to the challenge with labeled diagrams. Citations provided for ideas that came from outside sources such as online videos or other teams.	<u>Lists one or two possible solutions</u> to the challenge. No citations provided for ideas that came from outside sources.	<u>Does not list any solutions</u> to the challenge.	
	Select the best solution and plan	Explains why the solution was selected through testing and/or a decision matrix. <u>Fully describes the plan</u> to implement the solution.	Explains why the solution was selected. <u>Mentions the plan.</u>	<u>Does not explain</u> why the solution was selected or does not mention the plan.	
	Build and program the solution	Records the steps to build and program the solution. Includes enough detail that the reader <u>could recreate the solution following the steps in the Notebook.</u>	Records the key steps to build and program the solution. <u>Lacks sufficient detail to recreate the solution.</u>	<u>Does not record the key steps</u> to build and program the solution.	
	Test solution	<u>Records all the steps</u> to test the solution, including test results.	<u>Records the key steps</u> to test the solution.	<u>Does not record the steps</u> to test the solution.	
	Repeat design process	Shows that the <u>design process is repeated multiple times</u> to improve performance on an individual design goal or overall robot or game performance.	Shows that the <u>design process is not often repeated</u> for individual design goals or overall robot or game performance.	<u>Does not show that the design process is repeated.</u>	
	Usefulness and repeatability	<u>Records the entire design and development process</u> in such great clarity and detail that the reader could recreate the project's history and build the current robot from the notebook.	Records the design and development process completely but <u>lacks sufficient detail</u> to fully recreate the entire project or robot.	Does not record the design and development process or <u>lacks sufficient detail</u> to understand the design process.	
	Record of team and project management	Provides a <u>complete record of team and project assignments</u> ; written in ink; notes from team meetings including goals, decisions, and accomplishments; name or initials of author; each page numbered and dated. Design cycles are easily identified. Includes Table of Contents and/or Index so anyone can easily locate needed information.	Records <u>most of the information listed</u> at the left. Not written in ink. Organized so that team members can locate most of the needed information.	<u>Does not record most of the information</u> listed at the left. Not organized; needed information difficult to locate.	
	Notebook construction	Five (5) points if notebook is bound. Notebook must have been <u>bound before any entries</u> were made in it.	Zero points for any other notebook construction.	Zero points for any other notebook construction.	
Describe a few of the best features of the Engineering Notebook:				Total points for Engineering Notebook	