Engineering Design - Level 2 *Participant Resource Sheet*

In the Engineering Design Level 2 badge, participants will expand their design skills with an emphasis on prototyping. The design challenge must be unique from the design challenge in Level 1.

Complete all tasks to earn the Level 2 badge. The engineering challenge is determined by the team mentors and should be related to the FRC game challenge (current or historical).

Mentors will certify the participant knowledge using the spreadsheet and rubric located in the Mentor Resources tab. Note: The design challenge can focus on a sub-system of the robot. It is recommended to use an Engineering Notebook.

Complete all tasks and review with a mentor.

Name:_____

Email used for badges: _____

	Task	Mentor Sign and Date
Identify Challenge	Explain where to find motor, pneumatic, and operations restrictions. Demonstrate knowledge of size and weight requirements.	
Iteration	Given a design challenge, the student applies all steps in the design process.	
Brainstorming	Given a design challenge, the student develops multiple ideas with more detail, all ideas can be variations of a similar theme.	
Concept Analysis	Describes motions and mechanisms needed to perform tasks.	
Game	Develops prototypes of mechanisms needed to perform tasks.	
Calculations	Experiments with mechanisms and prototypes to determine forces and speeds needed needed to perform robot tasks.	

Badge Completed Date: _____

Date Submitted:_____