

## **Identify problem**

- \* I described the exact problem clearly, including a need and a client or market.
- \* My description of the problem includes information about the background, context, or setting for the problem.

## **Understand**

- \* I listed a set of design requirements (for example: The device must operate correctly more than 90% of the time.).
- \* I indicated the date on which each design requirement was added to the list.
- \* I included a source for each design requirement, such as a client, user, background research, or test results.

## **Ideate**

- \* I sketched multiple potential solutions.
- \* My sketches provided enough details to show each of my designs. (e.g.: labeling key parts or features)

## **Evaluate**

- \* I decided if each of my possible solutions might meet the design requirements.
- \* I described what is good and bad about each design.
- \* I described why the design solution I chose was the best one to try based on the requirements.

## **Prototype and Testing**

- \* I created detailed drawings for my solution.
- \* Where possible, I created computer models for the solution.
- \* I built a physical model of my solution.
- \* I tested my design to show that it meets all of the design requirements.

## **Iteration**

- \* I made improvements to my design through an iterative design process.
- \* I wrote a reflections about my experience working through the design process.

- \* My reflection describes the decisions I made and why I made them.
- \* My reflection describes what I would do differently if I tried to address the problem again, or how I would proceed with improving my solution given more time to do so.

### **Progression**

- \* I reviewed my Engineering design log to make sure I included relevant documentation of each stage of the design process.
- \* My portfolio provides enough detail to guide someone else in following my design process.
- \* My portfolio indicates that I followed a true engineering design process driven by customer needs and requirements, and that multiple solutions were considered and improved throughout the process.

### **Communicate your Solution**

- \* My presentation communicates my design or solution clearly, including models, renderings, and prototypes as appropriate (more than one item from this list required for 4 or 5).
- \* My presentation data from multiple sources.
- \* I made eye contact with the audience during my presentation.
- \* All of my team members participated in the presentation.