# Engineering Design Process Teacher Notes

## Materials:

STEM Kits constructed in Mechanical/Electrical Systems lessons. Spare parts to add additional features to these kits. May want to utilize laser cutting or 3-D printing to add components.

## Google Classroom Prompts:

Day 1: Engineering Design Process: Ask

* Directions:

We are going to design an improvement to the STEM kits that you built last week.  
This is an individual project and you will need to select 1 of the completed STEM kits as your beginning design.   
  
First, we will review the steps of the engineering design process  
Today we will be looking at the "Ask" step and completing a worksheet on defining the project and constraints.

* Attachment:

Engineering Design: Defining the Problem

Teach Engineering- Engineering Design Process graphic

Day 2: Engineering Design Process: Research and Imagine

* Directions: Too often we rely on just our own ideas and knowledge when thinking of a solution. It's important that you research, collaborate with others, and look at existing designs.  
  Follow the attached worksheet prompts to research ideas for your STEM kit modifications.
* Attachment:

Research and Imagine

Day 3: Build Day

* Directions:

Build the improvement to your STEM Kit.

Test and improvise.

* Attachment:

None

Day 4: Reflection

* Directions:

Complete your project building, if not finished from yesterday. In the last 15 minutes complete the reflection worksheet.

* Attachment:

STEM Kit Reflection