# Mechanical Electrical Systems Teacher Notes

## Materials:

## Google Classroom Prompts:

Day 1: STEM Kit Construction

Materials: Various cheap STEM kits purchased from Amazon that include battery packs, motor, buttons, fans, etc.

* Directions: We have a selection of STEM Kits to build. Most include a battery, a switch, and a motor. The goal is to construct all the kits as shown in the directions and compare their mechanisms. Once built we will be doing voltmeter measurements and circuit diagrams. At the end of the week, we will choose kits to modify with improvements.
* Attachment: None

Day 2: How to Solder Electrical Wires

* Directions:

1. Watch YouTube video –

<https://www.youtube.com/watch?v=6rmErwU5E-k&authuser=0>  
2. Practice soldering on telephone wires  
3. Show me a successful soldering connection for full credit  
\*Solder your STEM Kit project if needed.

* Attachment: YouTube video link

Day 3: Electrical Components Diagrams

* Directions: Go to <https://www.tinkercad.com/circuits>  
  Use the following login information:  
  Class code: IEASUILWE  
  Nickname: firstnamelastname25  
    
  Find the STEM kit circuit and click "Tinker this". Complete the circuit diagram to match your STEM kit circuit including motor, battery, switches, or buttons.  
    
  To submit assignment take a screenshot of both the circuit view and the schematic view and load into Google classroom.

You can also use these pictures for the Canva "How it Works" assignment.

* Attachment: None

Day 4: How Its Made Poster

* Directions:

Edit the Canva template page to include the following:

* + Pictures of project including electrical wiring
  + A short description of the role of each part
  + How the parts work together
  + How the user could see it work (push a button, click a switch, etc)
* Attachment: Link to Canva template page (be sure to set up as an assignment with each student having an editable copy)

<https://www.canva.com/design/DAGc8vccvVo/5XixTYh-yCUb6JB5CNMUFA/edit>