

### What's it all About?

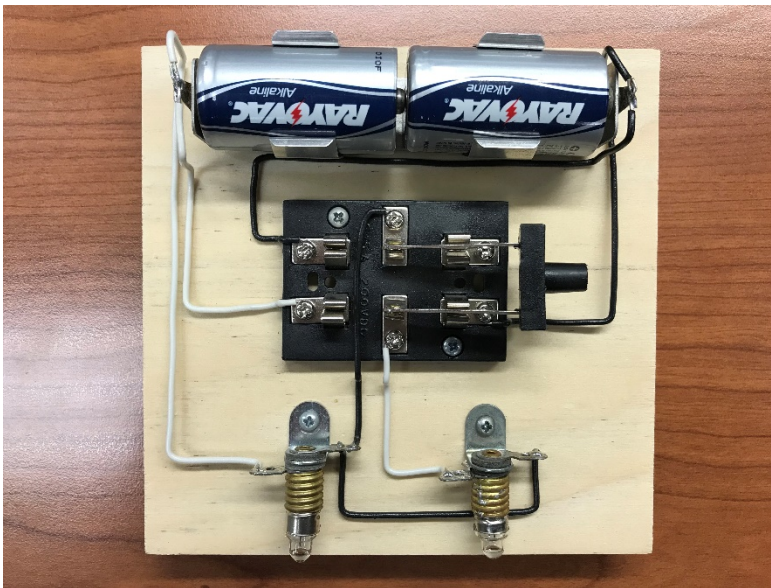
With the addition of a double pole double throw (DPDT) switch you can have both a series circuit and a parallel circuit on one display board. Low voltage DPDT surface mounted switch can be easily found and purchased from the internet. Simply use this as a replacement for the single pole single throw (SPST) switch included with the Level 1 kit.

### Keys to Remember

- Depending on what level you are going to display your circuit board the Skills being exhibited will be different. Refer to the Electric and Electronics Skills & Knowledge Chart.

### For the Project

- Use the Level 1 “Series or Parallel Circuit Board” project sheet as a guide for the materials, tools, and how to solder. You will need the additional DPDT switch and possibly more wire depending on how your circuit board is arranged.
- See the picture below and the wiring diagram on page 2 as a guide. The wiring terminals on the DPDT may vary, so look at those closely to determine how to route your wire. The wire could interfere with the switch handle.



A double-pole-double-throw switch may be used to connect two electric loads in series or in parallel. For example:

- Two light bulbs could be switched in parallel for bright lights or in series for dim lights.
- Two heating elements could be connected in parallel for high heat or in series for low heat.
- DPDT switch may also be used to connect batteries (or other sources) in series or parallel for a high voltage or low voltage connection to a load.

