Vex Reverse Engineering Online Challenge

By : 81101A ReStart

We are 81101A from Dakota Meadows Middle School from Mankato, Minnesota. Our team members are Dylan, Sam, Max, Ethan, and Evie.

We chose to deconstruct a flashlight because we didn't know much about how they worked. We learned that small flashlights are surprisingly simple to deconstruct. Another thing we learned is that they have a surprising amount of parts. Below is a list of all the parts we found. This is a picture of the flashlight we started with.

Flashlights work because energy from the battery pack flows to the switch. The switch allows or stops energy from flowing though. If the switch is in the off position, it will not allow energy to flow to the LED’s. Alternatively, if the switch is on, it will allow energy to flow from the battery pack to the circuit board. From there the circuit distributes energy to the LED’s and back to the battery to complete the circuit. If the circuit is complete the LED’s will illuminate causing a room to be brighter.

Thank you for your consideration.
Sincerely,
81101A ReStart

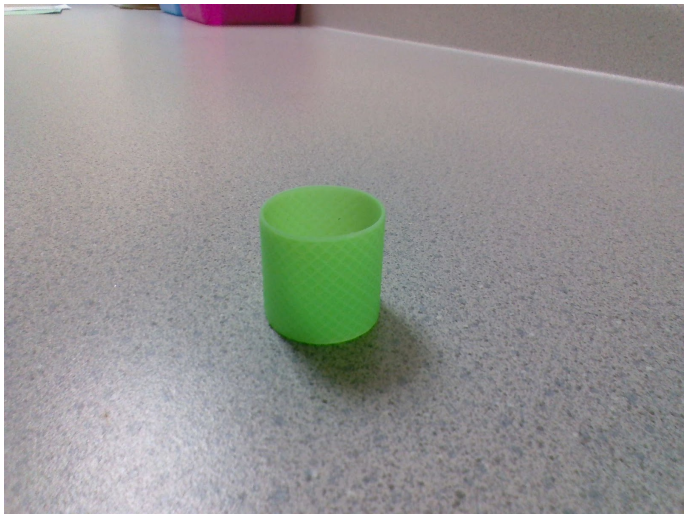
Parts catalog:

Light emitting diode (LED) Count:9

Tactile Switch (Button Switch) Count:1

Silicon Grip (large) Count:1

Silicon Grip (small) Count:1



Silicon Button grip Count:1

Wrist Lanyard (Can’t Fit On Wrist) Count:1

Body Tube Count:1

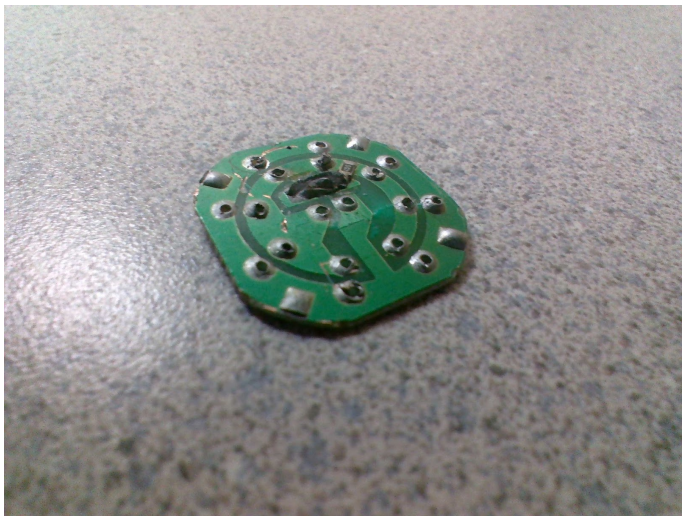
Battery Pack Count:1

AAA Battery Count:3

Button Container Count:1

LED Lens Count:1

Circuit Board Count:1



Conductive Spring Count:2

Snap Ring Count:1

Light Reflector (A Piece Of It) Count:1

Rubber Button Stop (A Piece Of It) Count:1