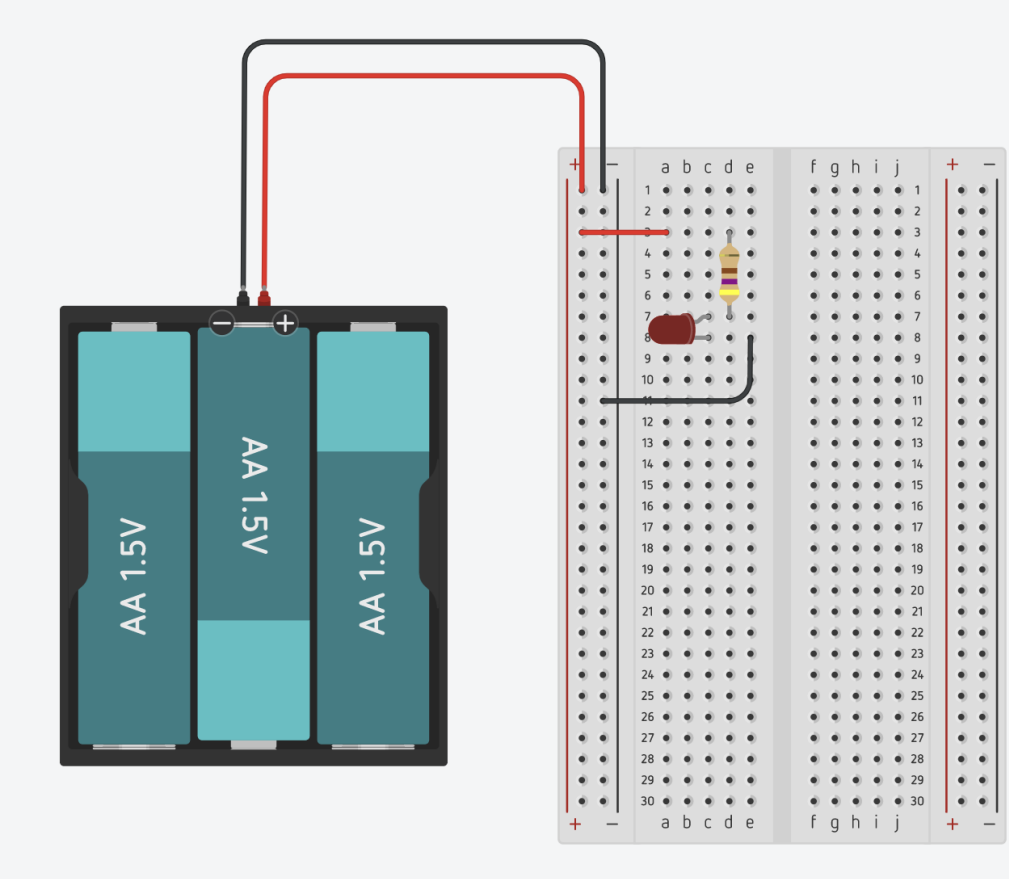
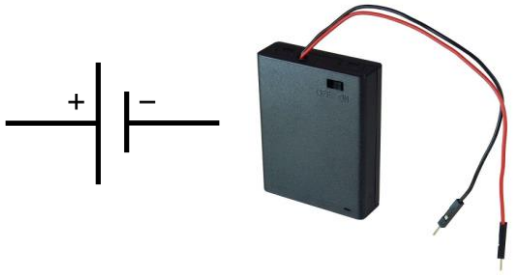
Conduction Detector

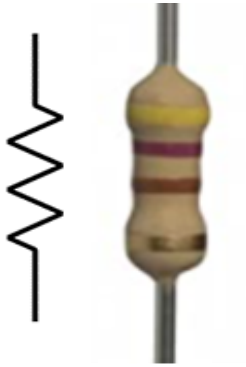


Here are the components you will need to build the Basic LED Circuit.

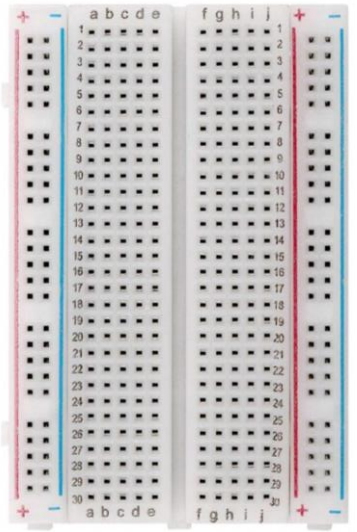
4.5V BATTERY PACK



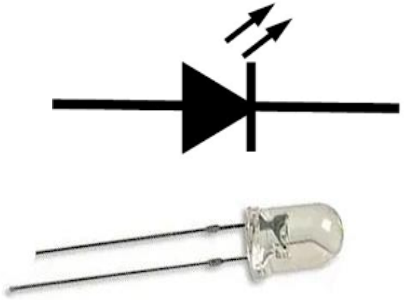
470Ω RESISTOR



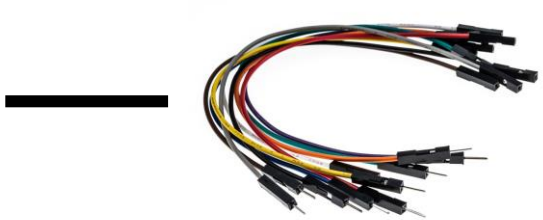
BREADBOARD



LED (Light Emitting Diode)



WIRES



? ITEMS THAT YOU MIGHT TEST FOR CONDUCTANCE

- ❑ Diode
- ❑ LED
- ❑ Resistor
- ❑ Wire
- ❑ Pushbutton Switch
- ❑ Pencil
- ❑ Paper

Figure A: Circuit Diagram or Schematic

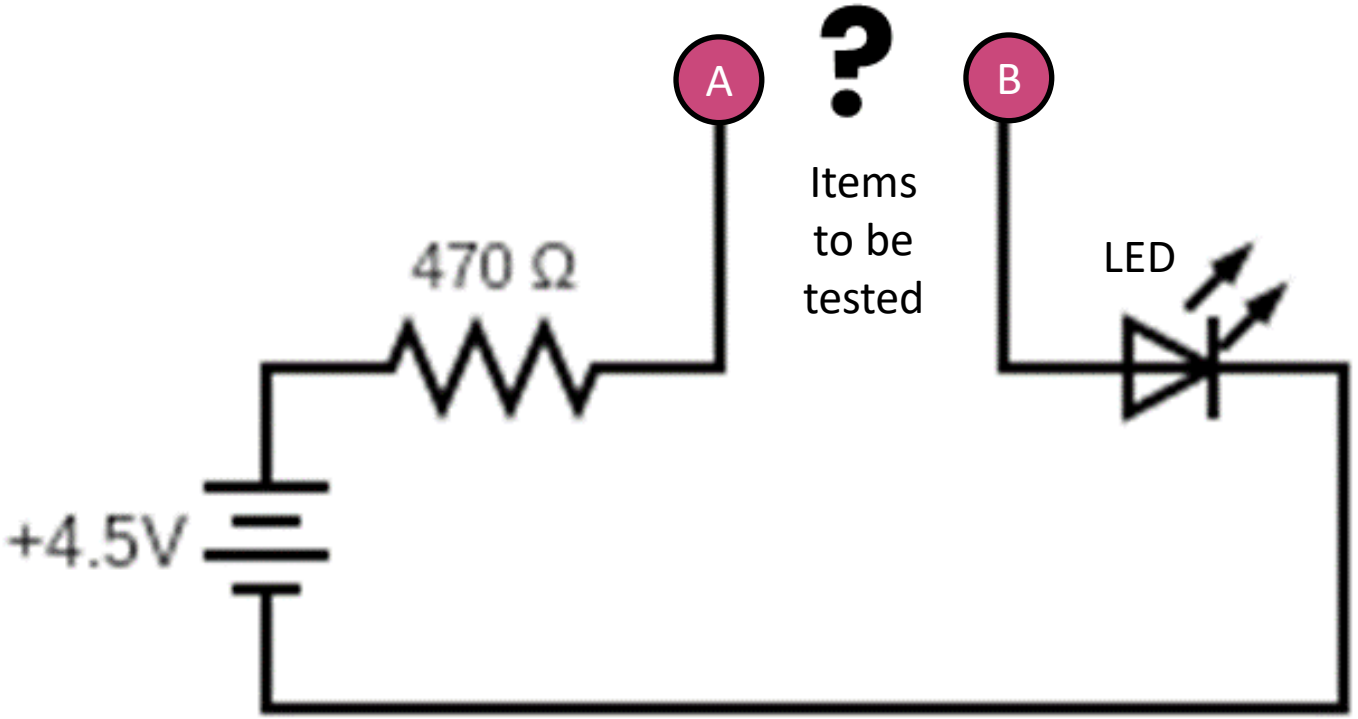
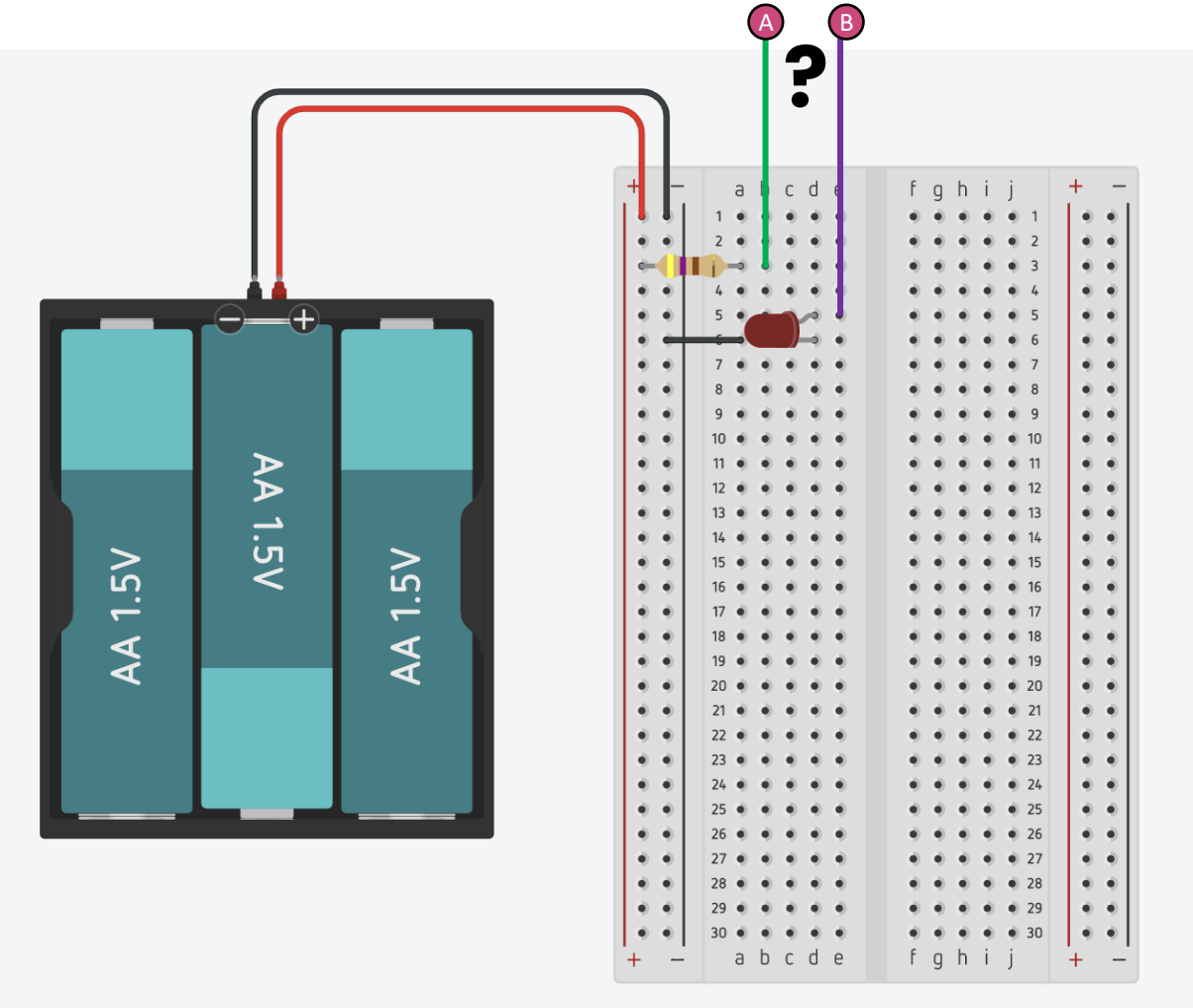
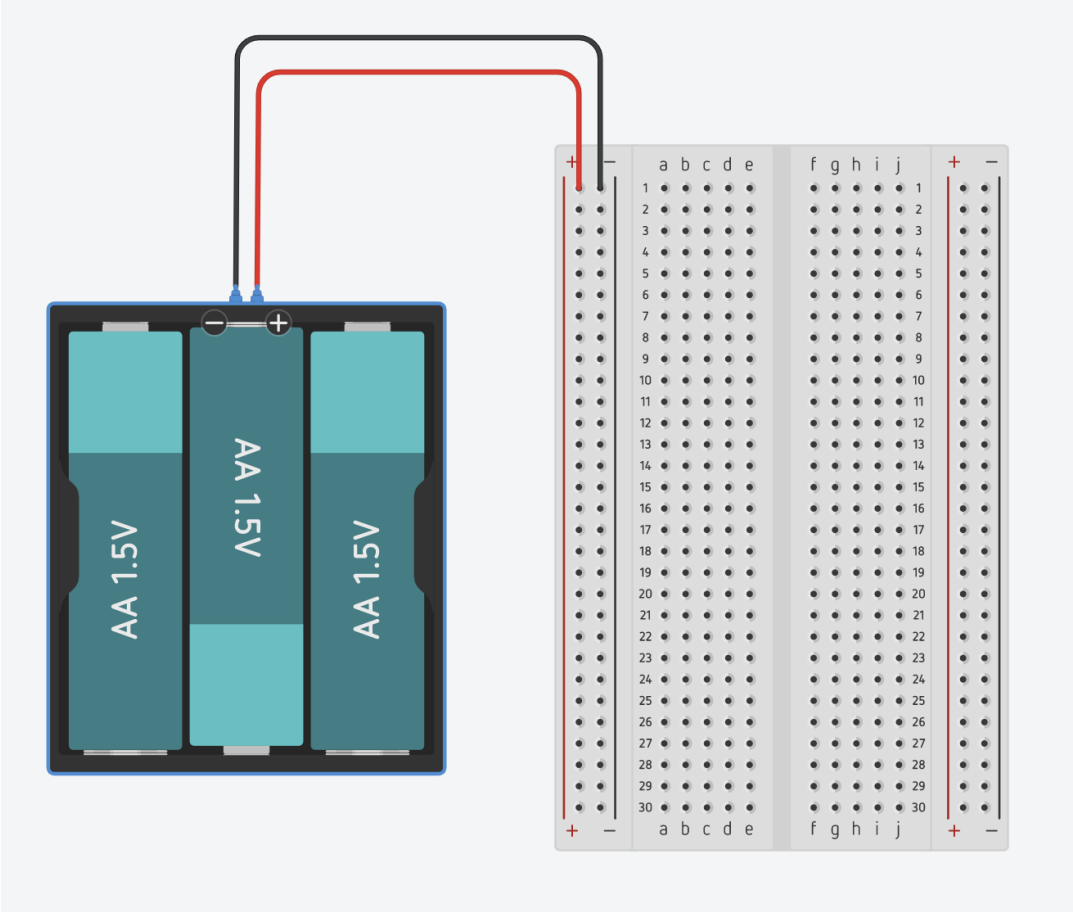


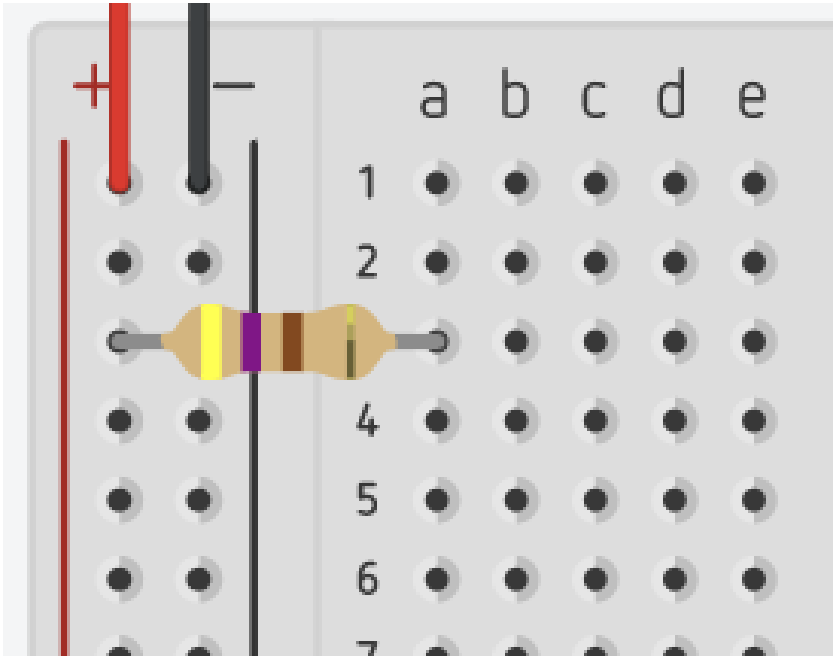
Figure B: Drawing of your circuit

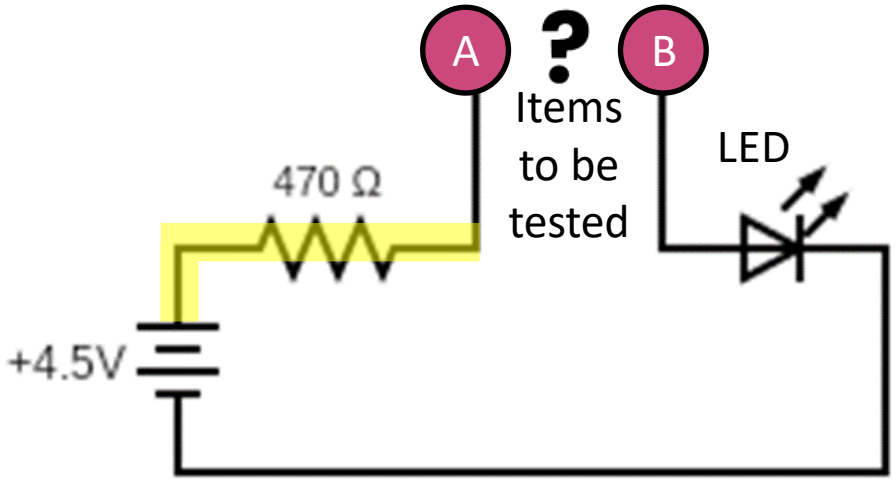




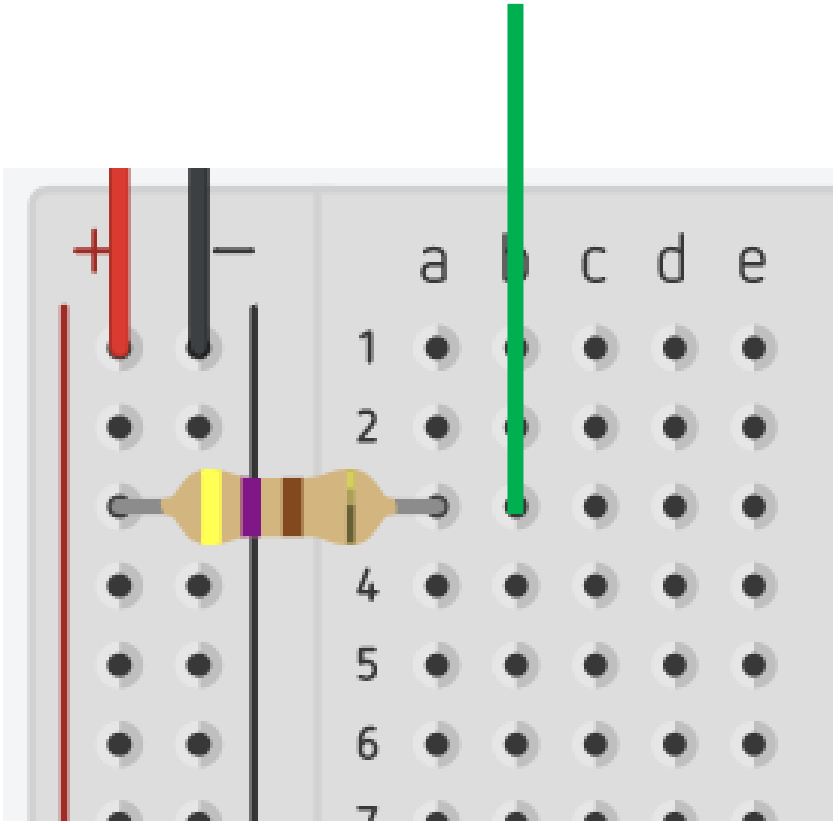
Hook up your 4.5 volt battery to the breadboard

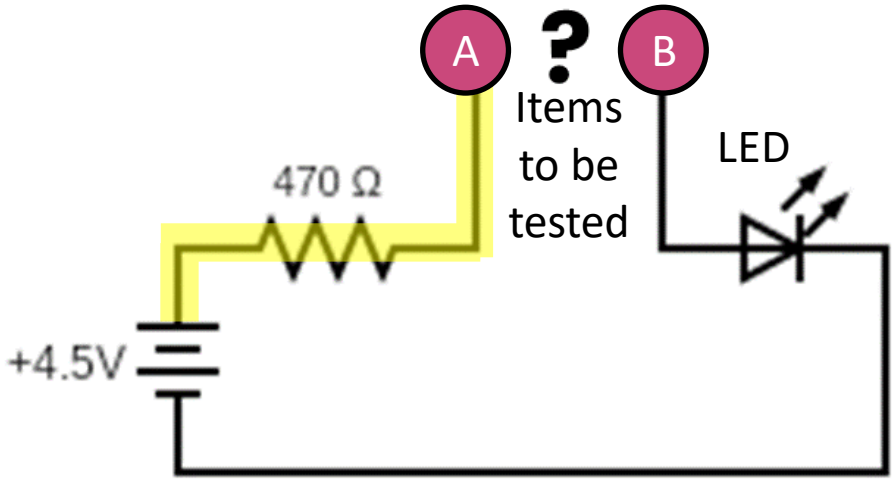
Make sure the positive (+) and negative (-) ends of the battery are connected to the appropriate (+) and (-) power buses on the breadboard. Make sure the battery is turned off! Only turn on the battery after the circuit is completed!



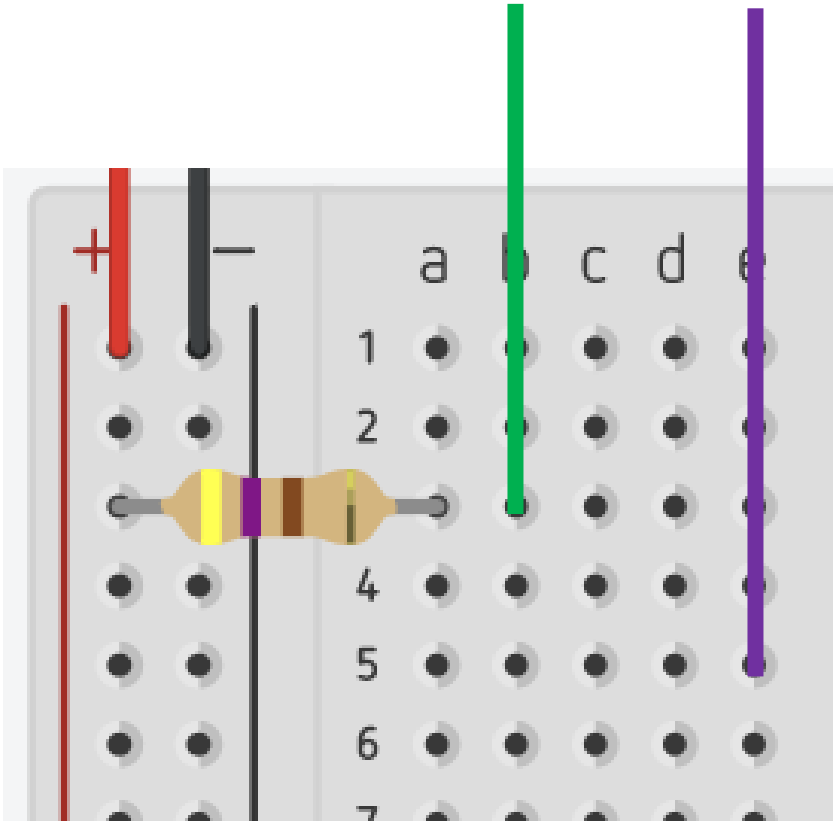


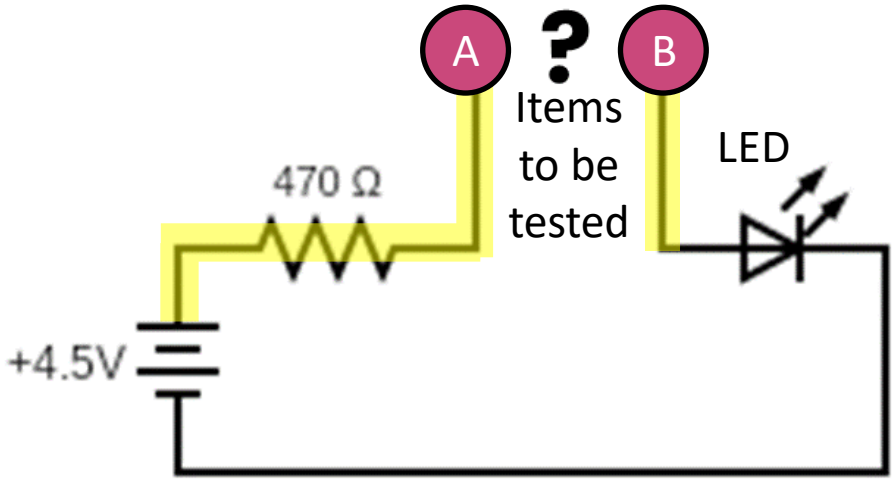
Connect the 470Ω resistor from the (+) power rail to 3A on the terminal strip.



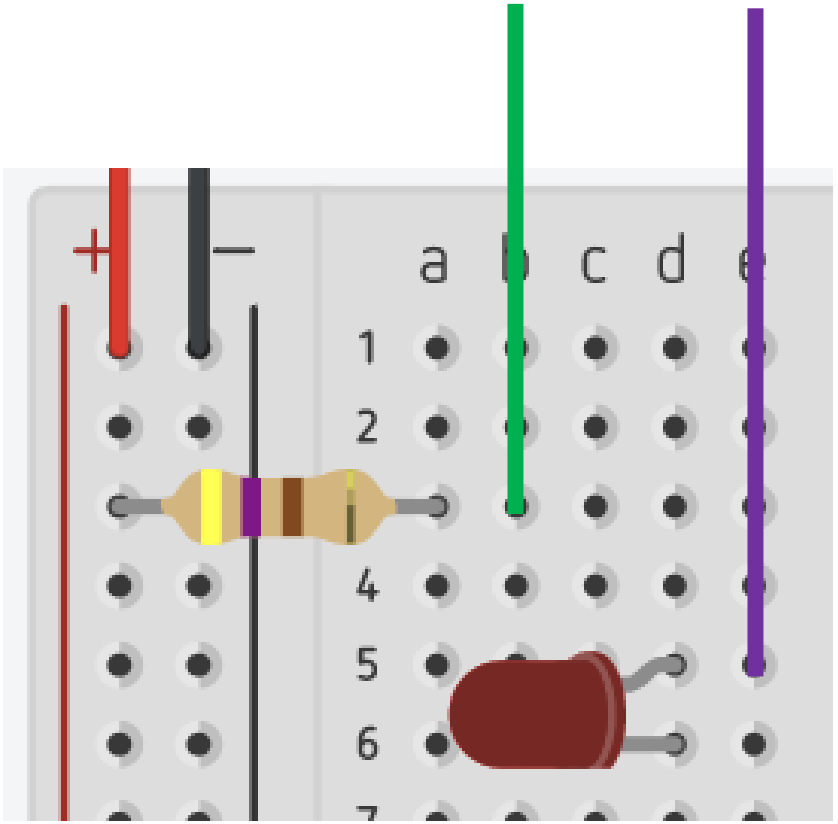


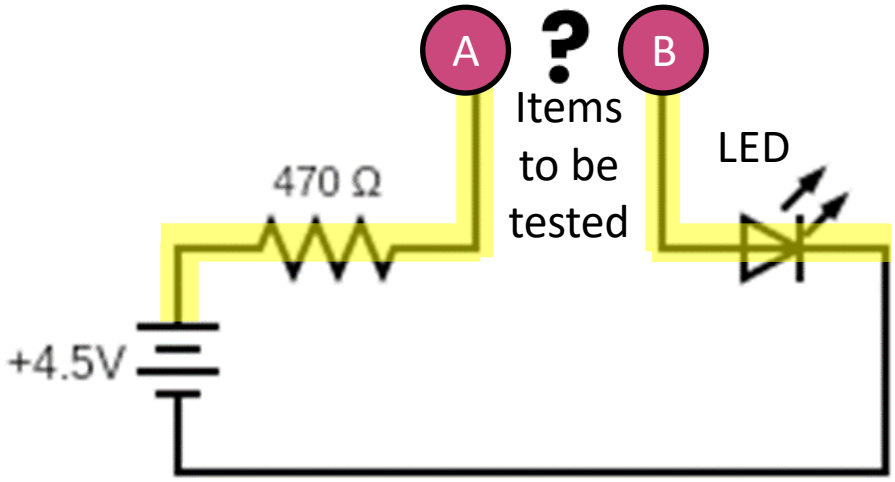
Connect the first testing wire to 3B on the terminal strip.



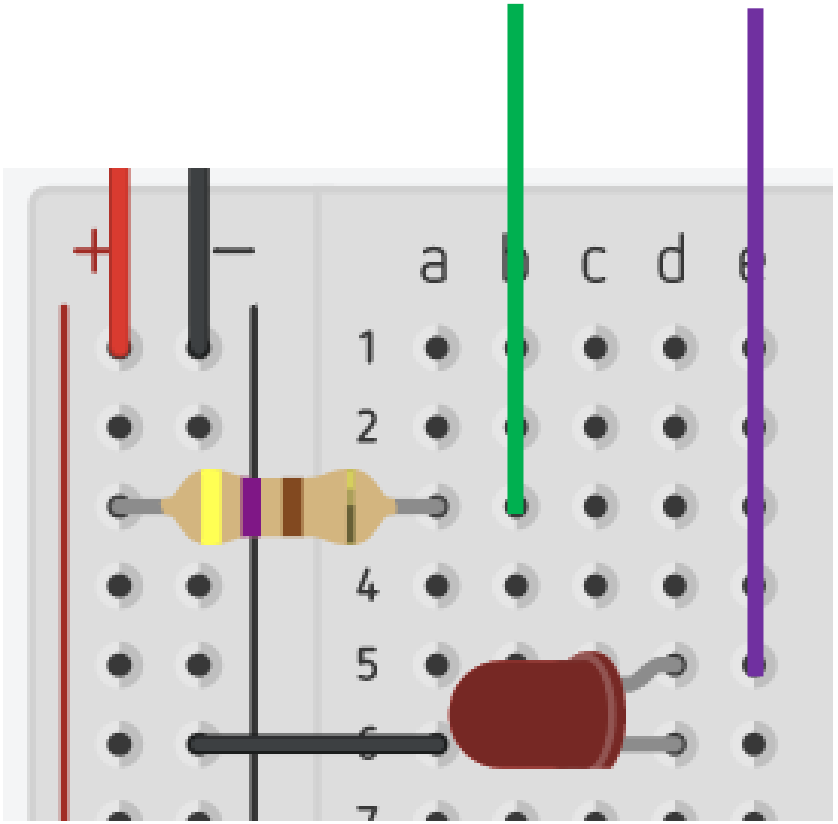


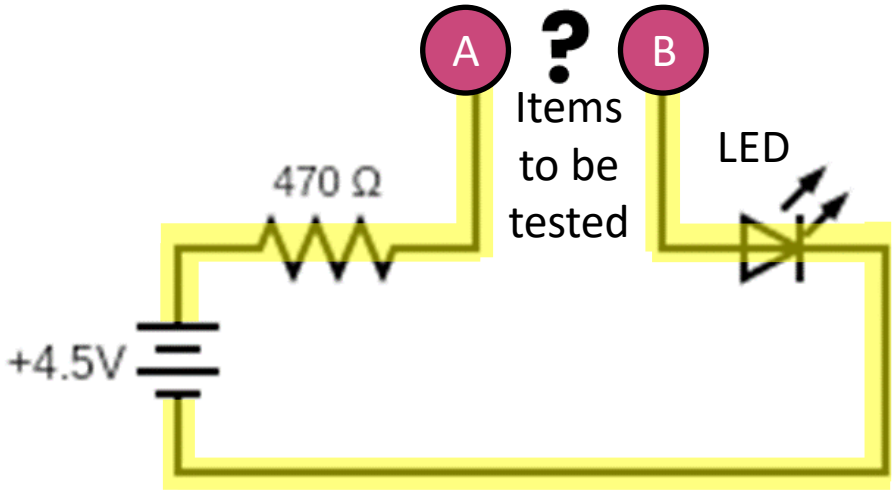
Connect the second testing wire to 5E on the terminal strip.



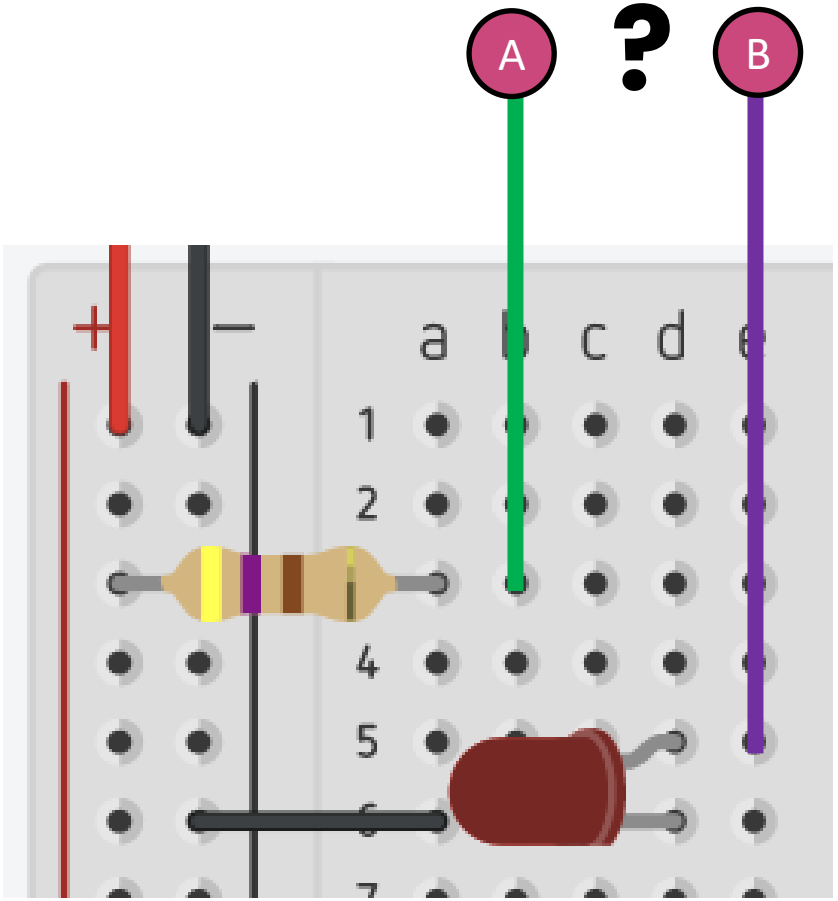


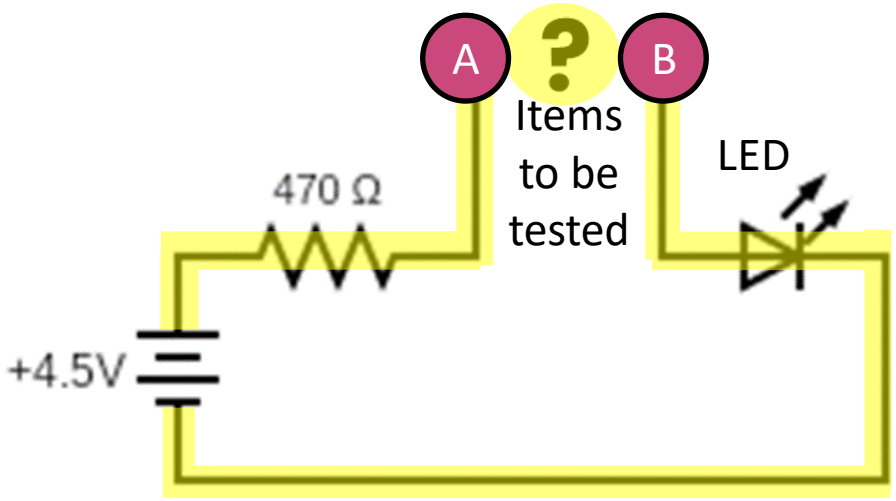
Connect the (+) leg of your LED to 5D and the other (-)end to 6D





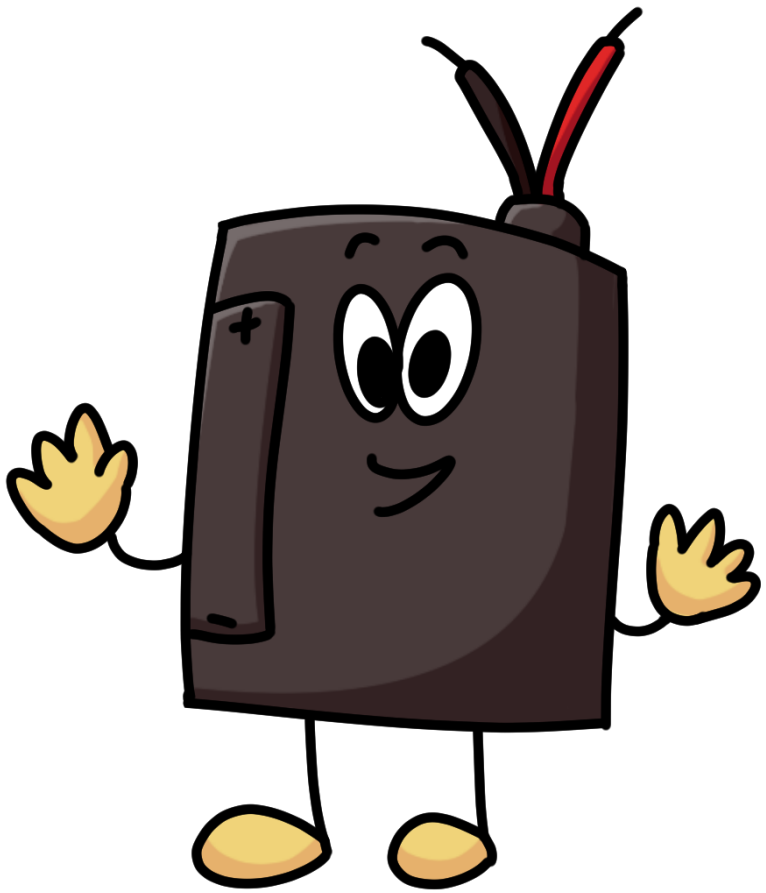
Connect the LED to ground by connecting one end of the wire to 6A and the other end to the (-) power rail.





Turn on the battery pack and connect the testing wires to the various items you will be testing to determine which ones conduct and which ones do not!

WARNING! never plug anything into a wall socket as this could be deadly!



Try connecting different objects you have around the house between points A and B. If the LED lights up, the object is conductive!

You might also try another resistor, jumper wire, or a diode. Be sure to try the diode both ways.

Create a data table to record which items light the LED.

SQUARE BRAIN

Conduction Detector