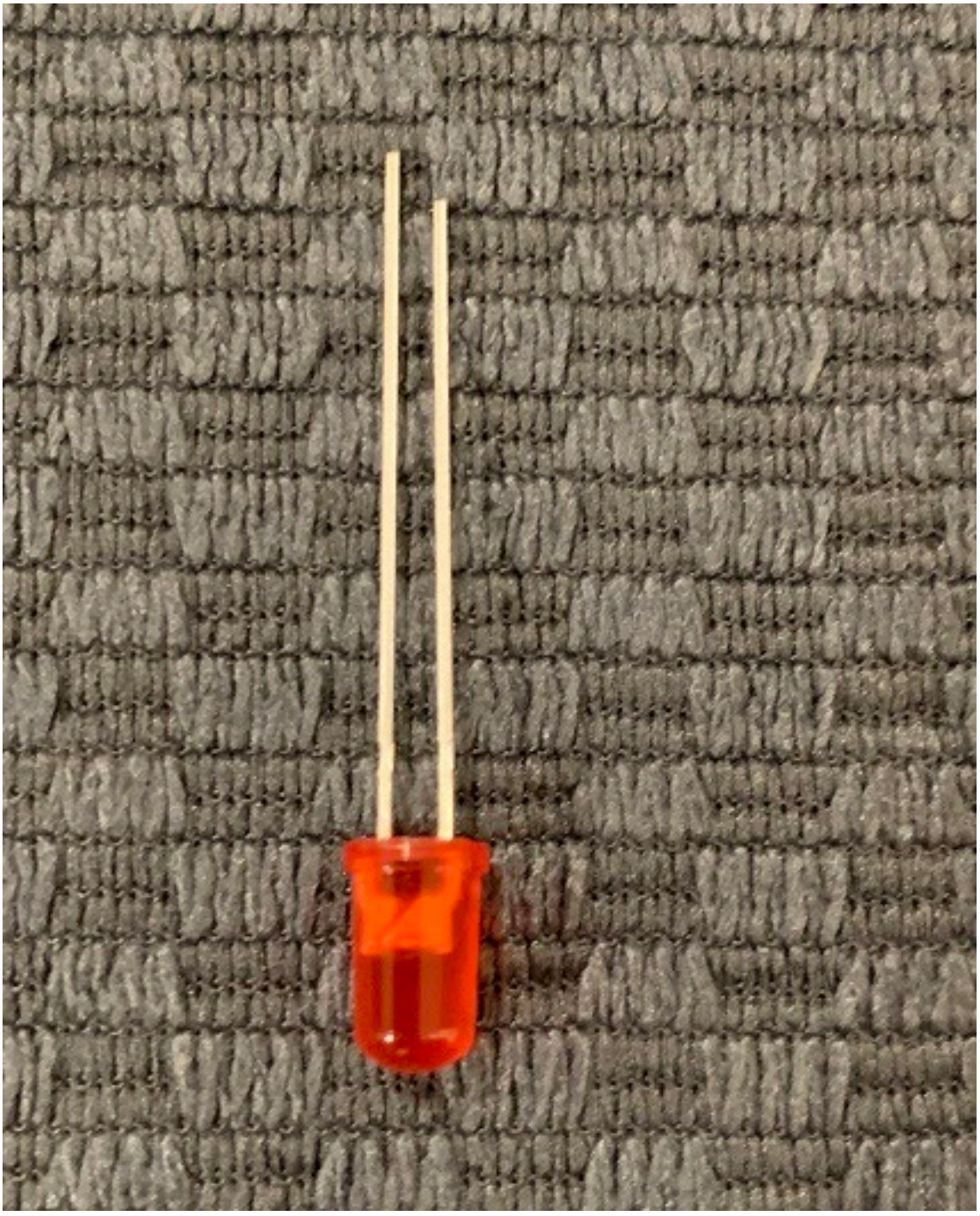
Maker Madness Light Bulb Gets Lit! *Might need to change the name*

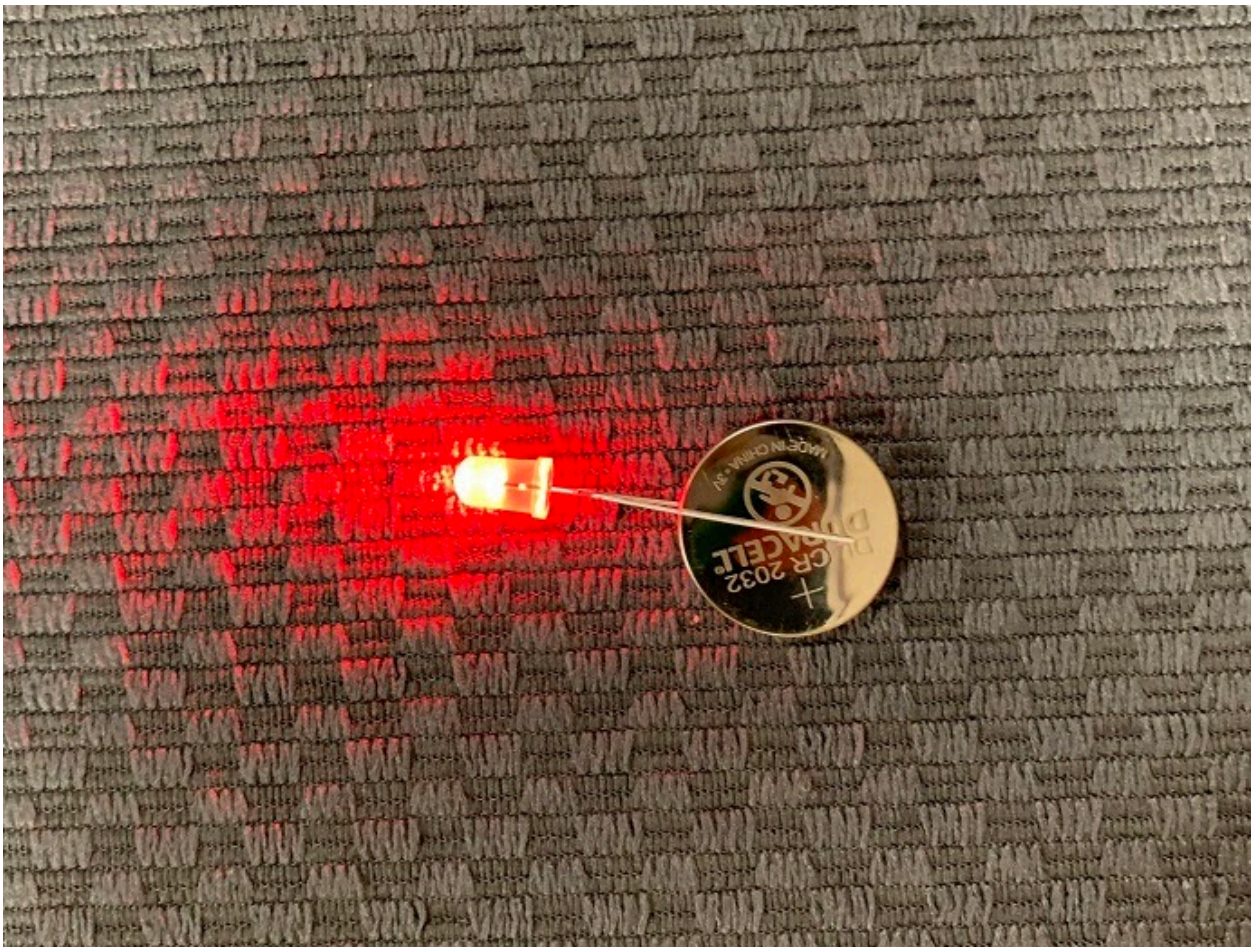
Build a parallel circuit to make your light bulb shine!

Supplies:
1 Paper light bulb
1 CR2032 3V button cell battery
2 LEDs
Conductive Copper tape
1 binder clip
1 push pin or needle (not included)

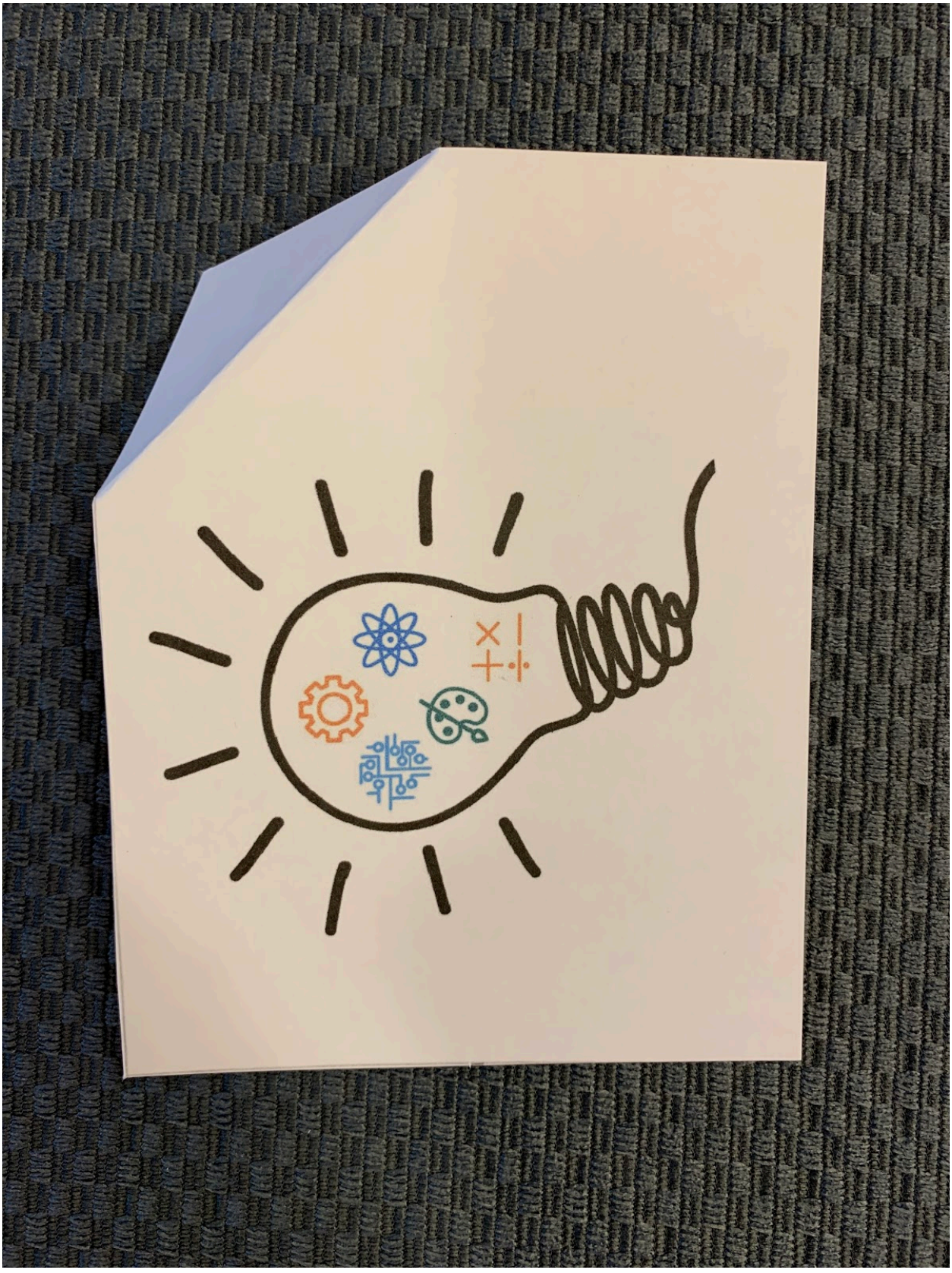
Test your LEDs and the battery. Each LED has two prongs. One is slightly longer than the other. The longer prong is positive. The short prong is negative.



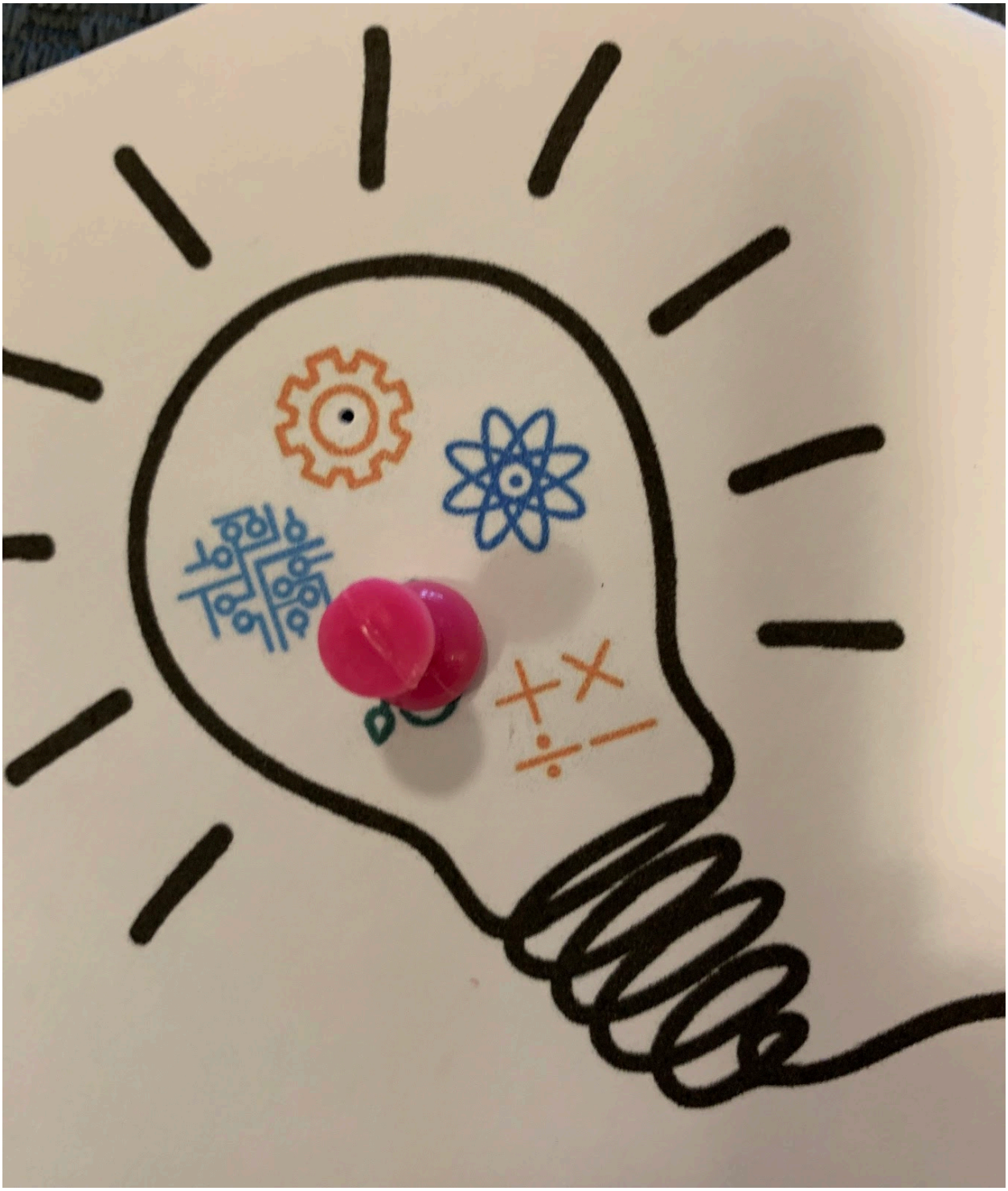
Place the battery between the two prongs with the positive prong touching the positive side of the battery and the negative prong touching the negative side.



Fold back the top right corner of the light bulb image

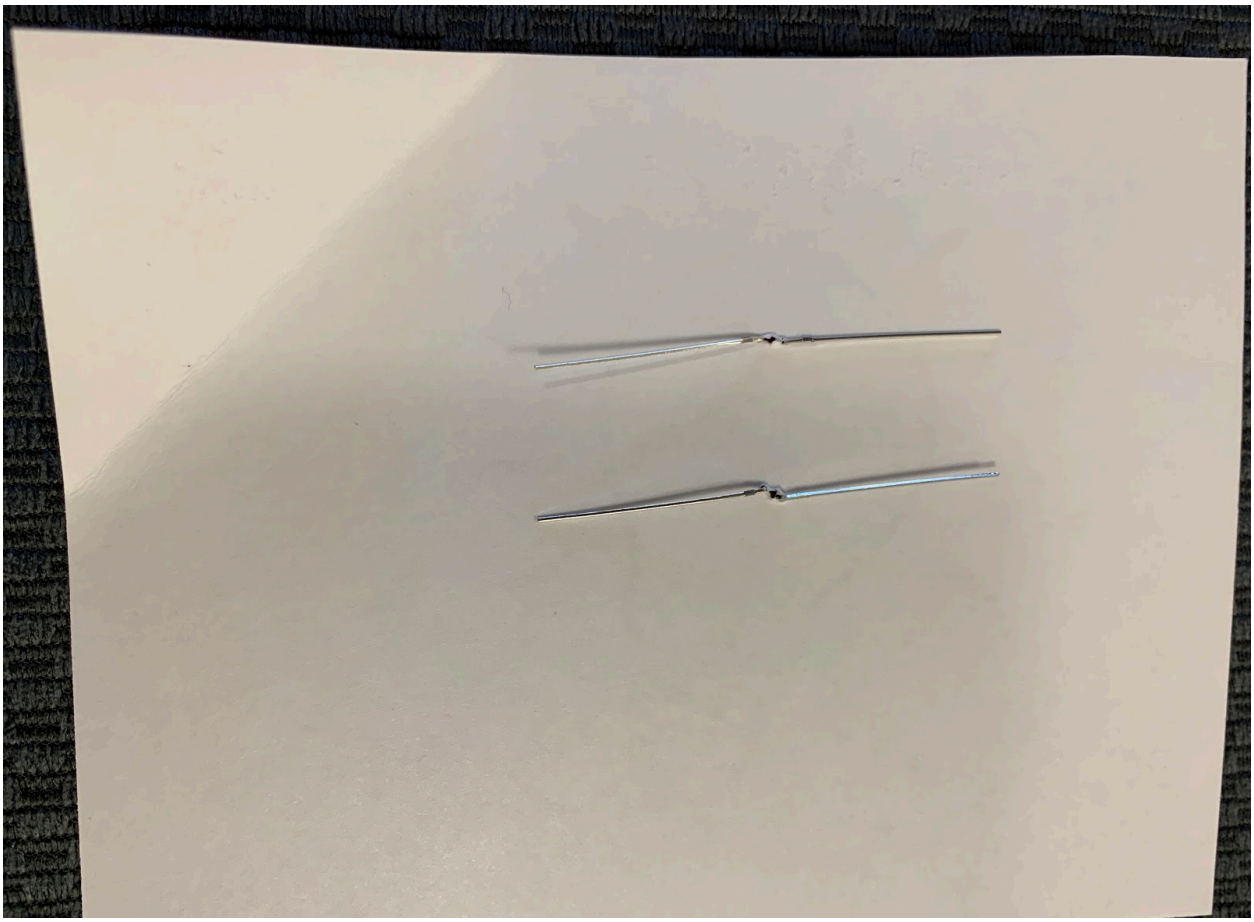


Use your push pin or needle to poke small holes in your light bulb for the LEDs. The holes should be parallel to each other to create the parallel circuit. For example, you can put one whole in the gear and one in the painters pallet.

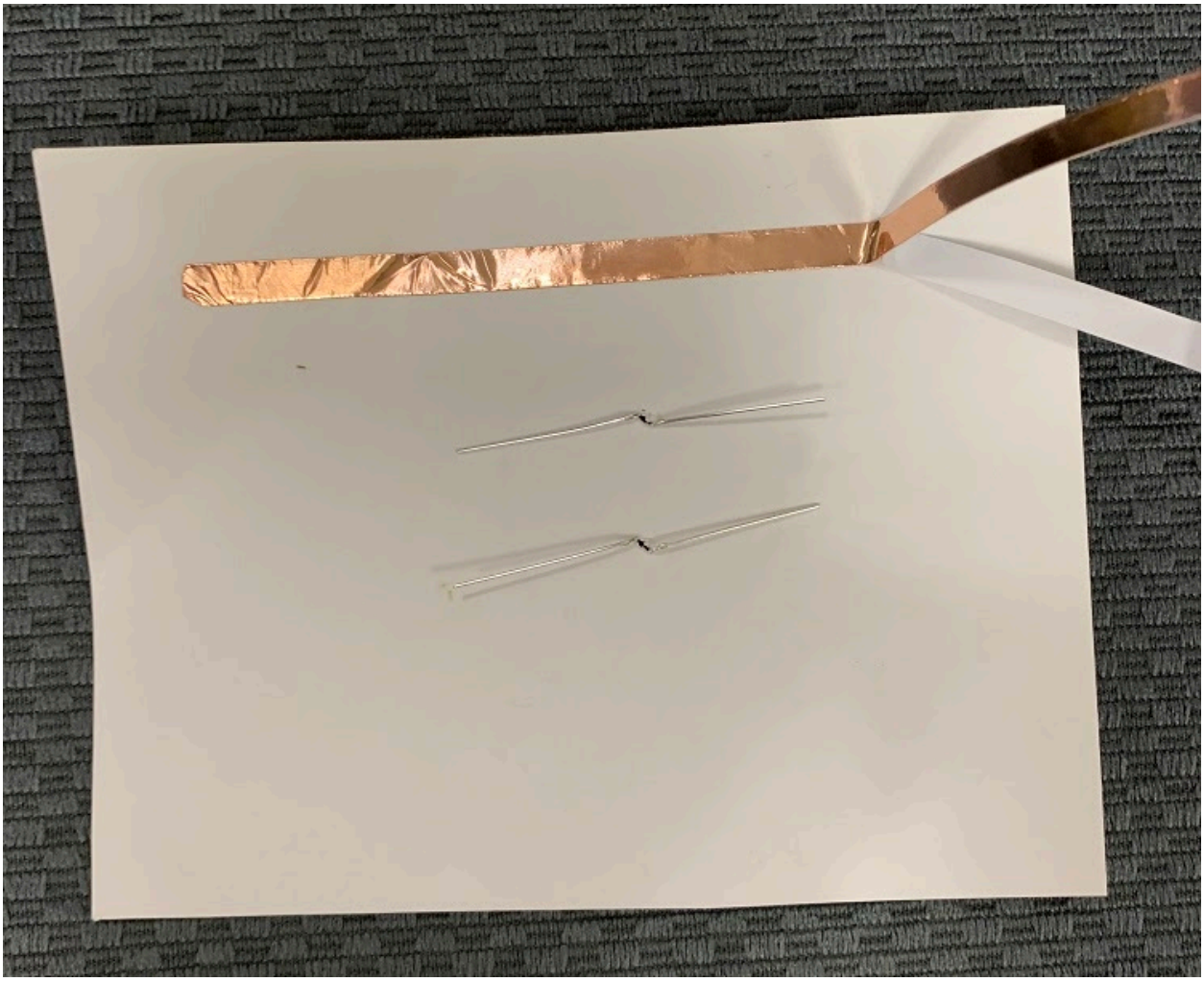


Thread the prongs of each LED through one of the holes in the paper light bulb.

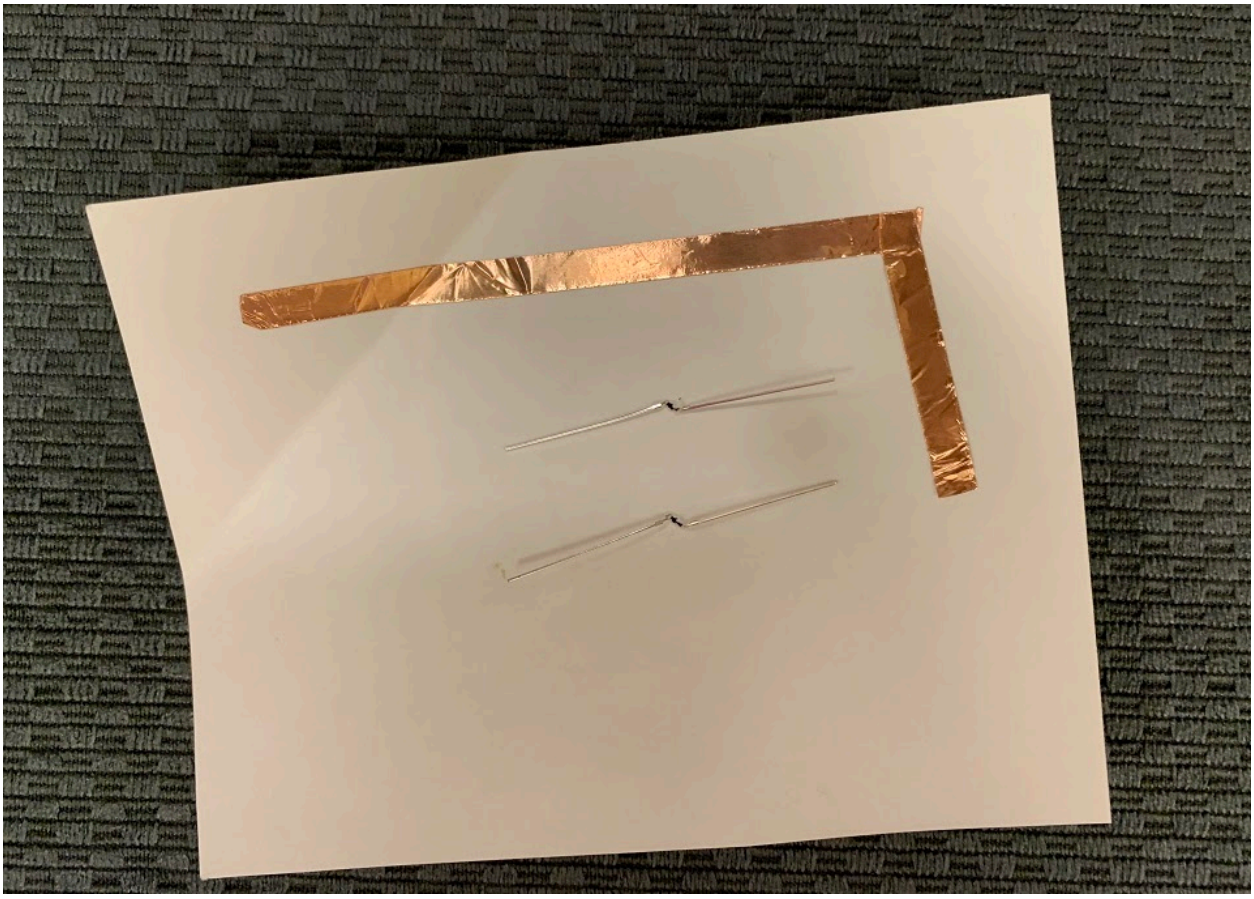
Turn over the paper and bend back each prong - make sure that both positive prongs are on the same side! In this example the longer prongs(+) are on the left side.



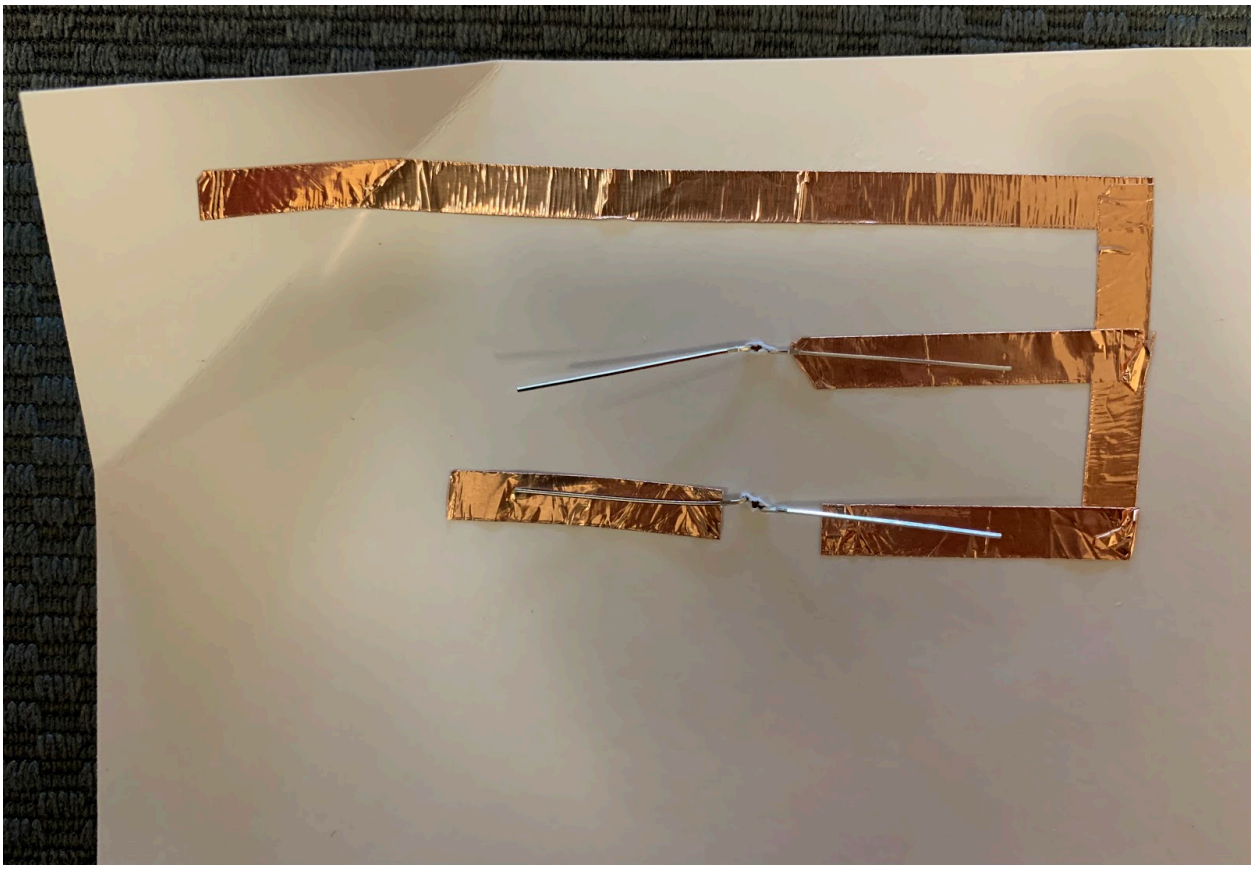
Take the copper tape and peel back the white backing. Attach an 4 inch piece (approx) of copper tape horizontally from the middle of the triangle formed by the fold in the paper past the end of the far prong.



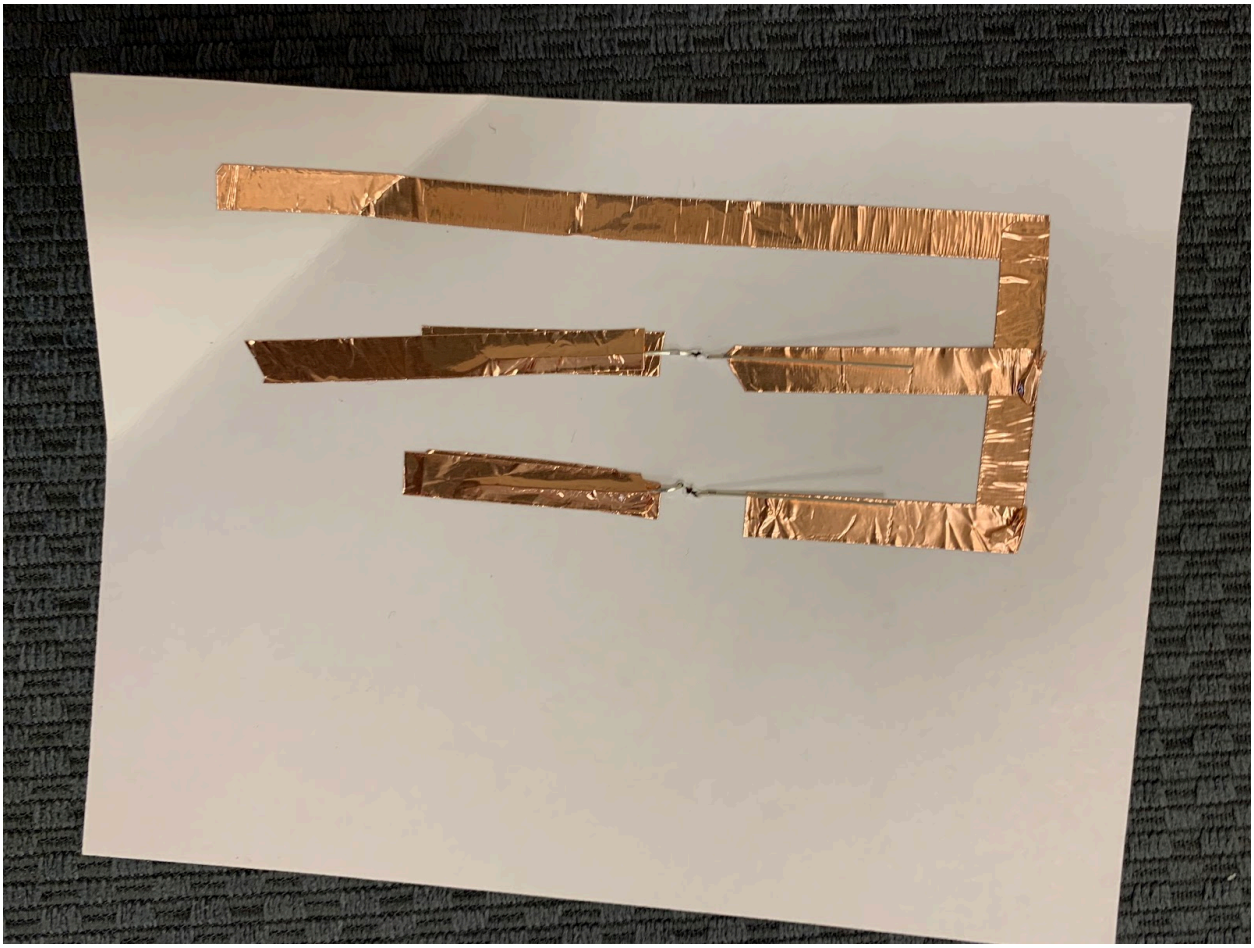
Attach a vertical piece of copper tape to the end of the horizontal piece down to the second LED prong.



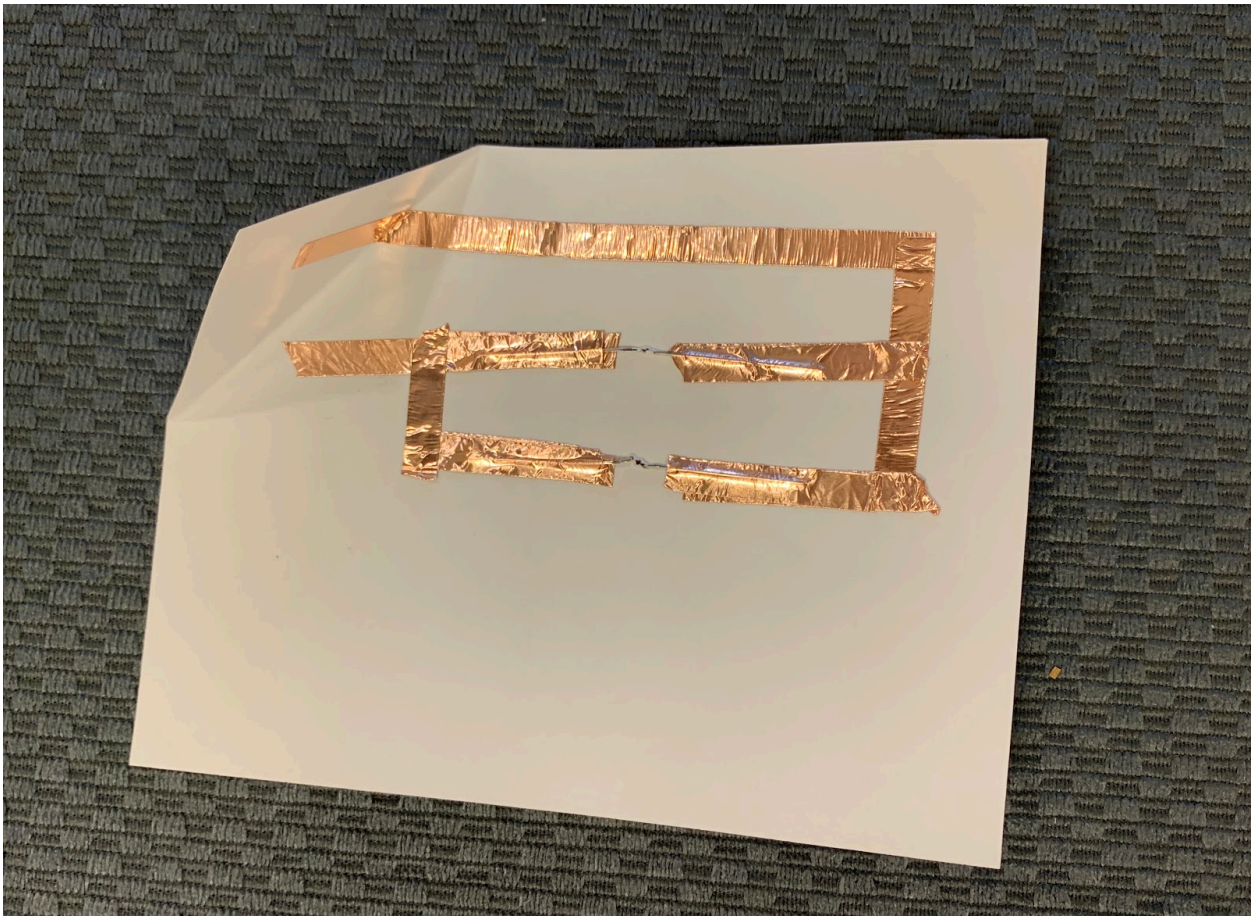
Place copper tape under each prong. The tape shouldn’t meet at the LED.



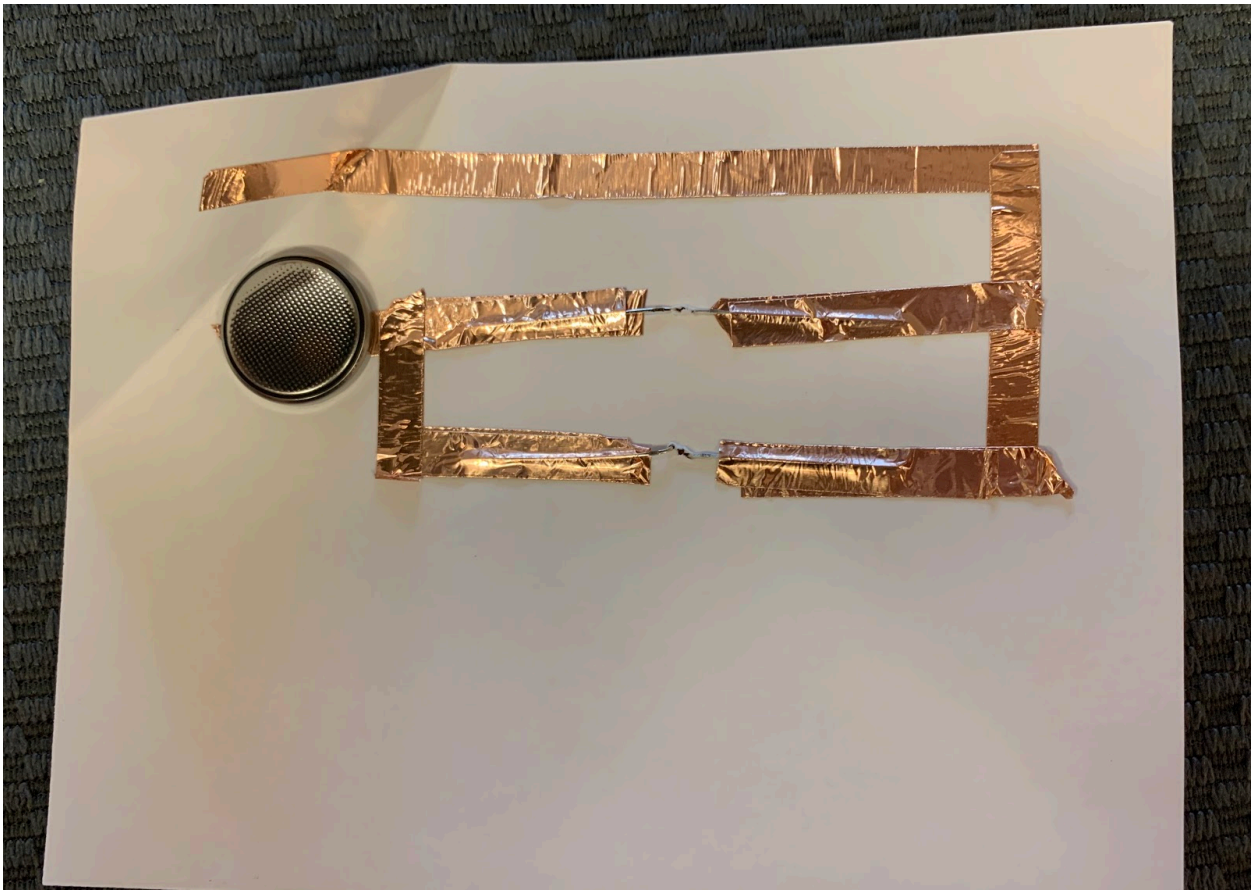
Once you have tape under each prong you'll add another piece of tape over the prong - like a sandwich! The tape on the top left prong should be a little longer than the others.



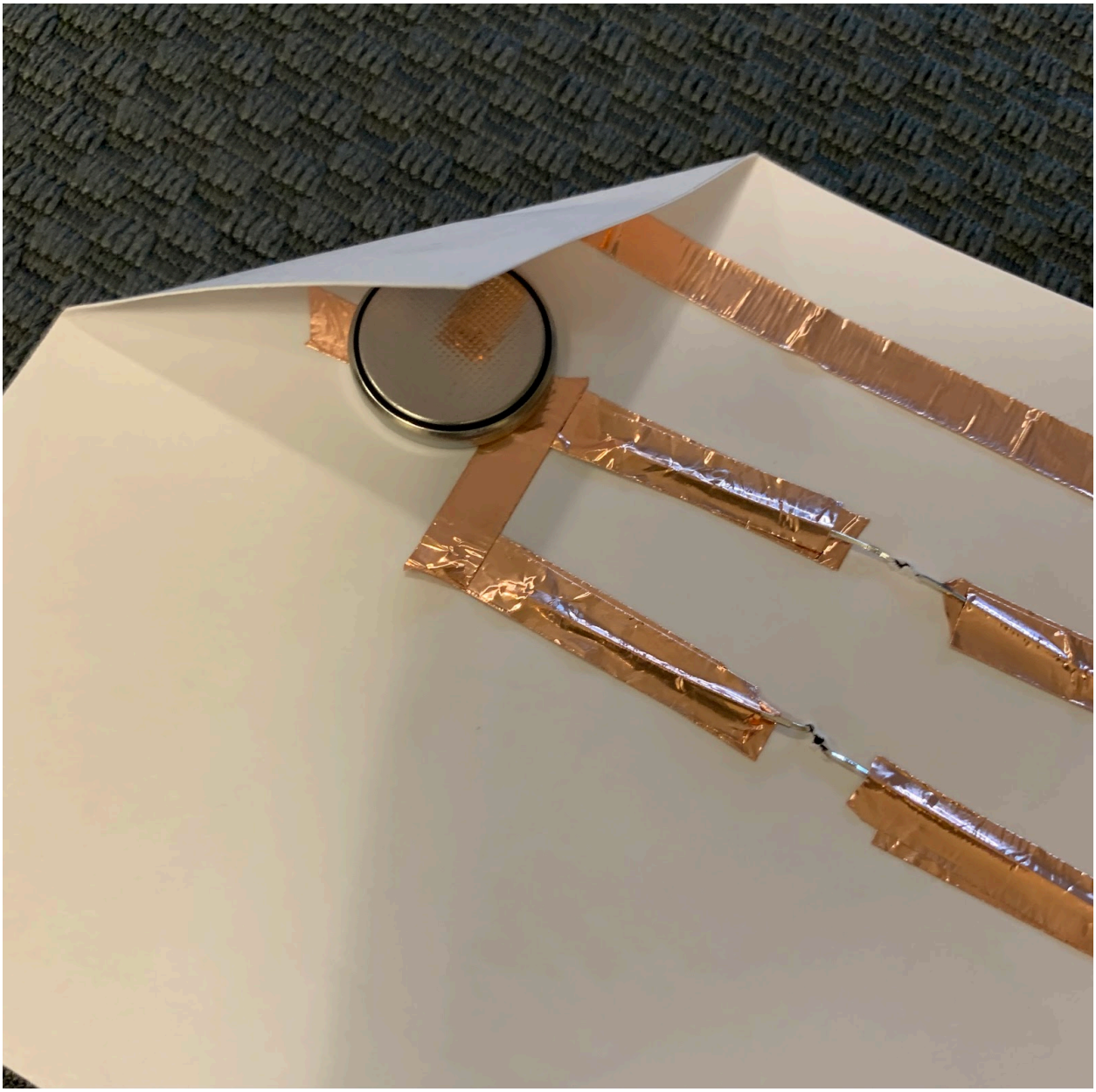
Add one more vertical piece of copper tape to attach the two prongs on the left side.



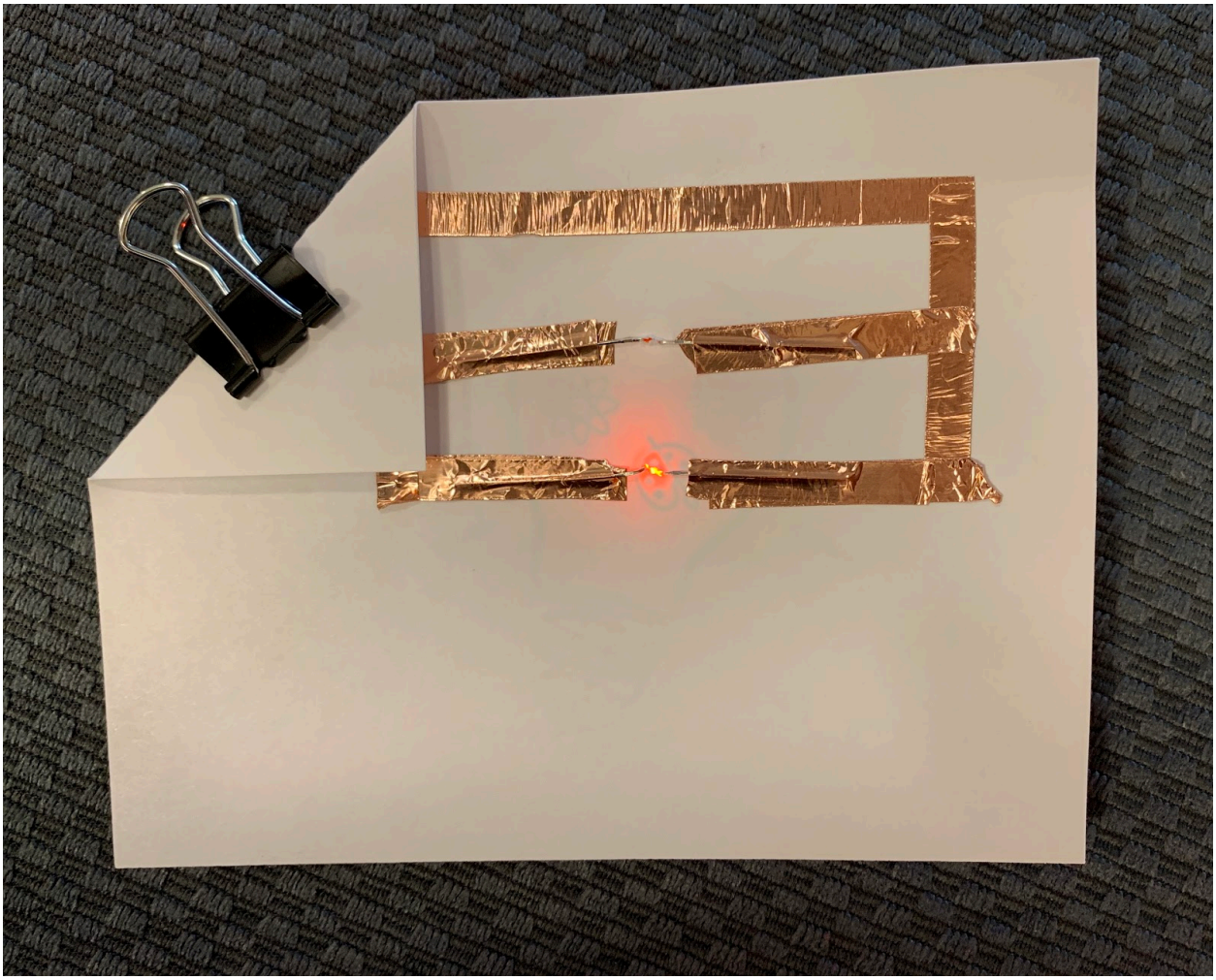
Now it’s time to test your circuit! Place your battery on the tail of the top left prong. If the prongs on the left are positive (the longer prongs) place the positive side of the battery facing down. If negative, do the reverse!



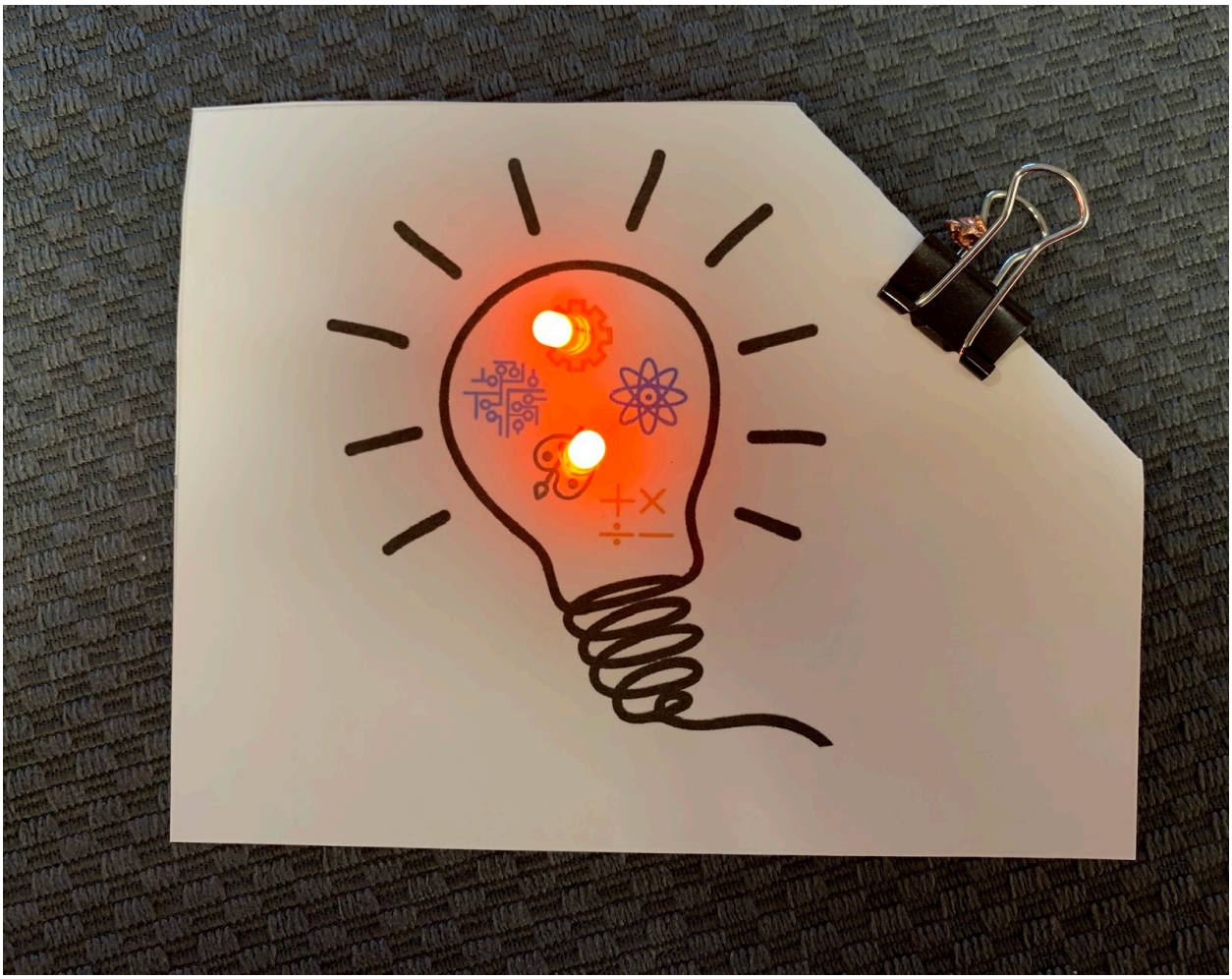
Fold the Paper at the crease and your LEDs should light!
Make sure that the circuit is closed by checking that the copper tape on the fold touches the battery.



Use the binder clip to secure the battery to the circuit.



You have a real “LIGHT” bulb!!



Troubleshooting if your light bulb doesn't light:

1. Check that the circuit is closed on the battery.

2. Check that the battery is on the proper side.

3. Check that tape connects all around the circuit EXCEPT at the LEDs.

4. If none of the above you may need to remove some tape to check that both positive prongs are on the same side.