Task Creation Instructions Graphite Circuits

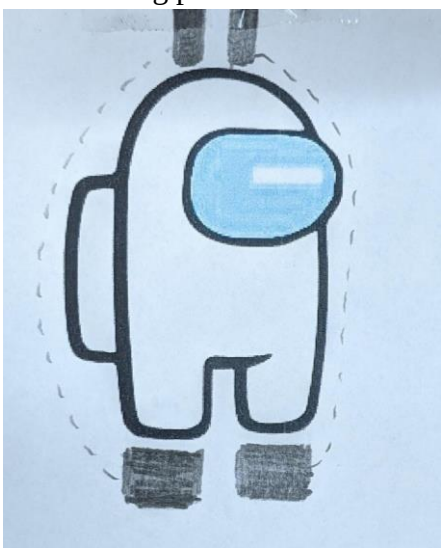
Materials:

9v battery
Printed Among Us Graphic(s)
Graphite Pencil(s)
LED Light(s)
Transparent Tape
Homemade Electrical Box (optional)

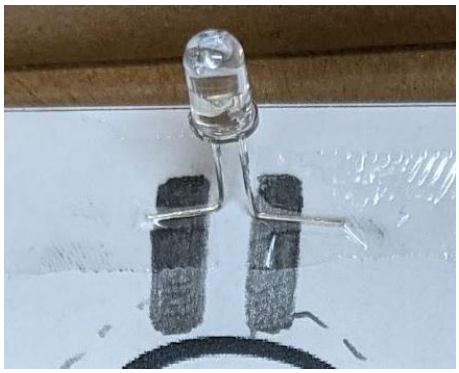
Set Up Instructions:

1. Print out Among Us Graphics. Make sure they are not too large as graphite from pencils isn't the most efficient conductor and a circuit that is too large won't work.

2. Pick two points on your graphic, I picked the top and bottom of the character. This is where you will make your graphite terminals (dark, thick squares of graphite that **Do Not** touch each other). Then draw a dotted line where you want the circuit to go, connecting each of your terminals like the following picture.



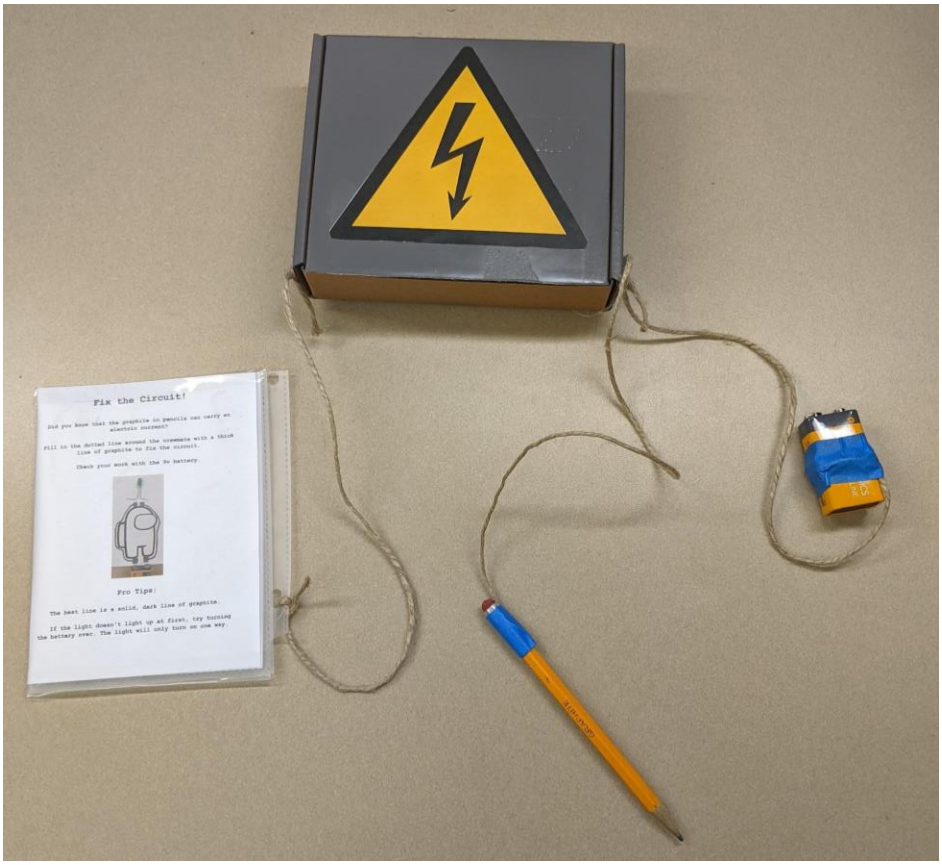
3. Next, tape an LED light to a pair of your graphite terminals, taking care to make sure each wire from your LED is firmly secured to the graphite. Make sure the wires of the LED **Do Not** touch each other or are otherwise connected by a single side of the circuit.



4. Now you are prepped and ready to go!

How to Run the Program:

1. I used an old cardboard box to make a fun little electrical box to add a little to the activity. I then attached a pencil, 9v battery, and instructions to the box via string.



2. Kids can use the pencil to make the circuit...

3. And then check it with the 9v battery. If the LED lights up, the circuit is complete!

TIPS:

- The LEDs are sensitive to current flow. This means they have a positive and a negative wire and therefore will only light up when the 9v battery is applied using the correct orientation of terminals. Be sure to mention this in your instructions to the kiddos.
- As mentioned above, make sure that all your LEDs are firmly secured to the graphite terminals. They will not light up otherwise.
- Make sure to instruct the kids to make thick graphite lines, otherwise not enough electricity will make it to the light.
- If you are planning to do this program in a room with lots of light, or outside, I would highly recommend making the electrical box. Not only is it pretty cool, but it will help shade the LED and make it easier to see when it lights up.
- You might have noticed the notches cut into the cardboard electrical box. Those are used for quickly replacing the completed Among Us circuit with a new one.
- The LEDs I used are rated for 3v. I use these because they are brighter than others I could find with a higher volt rating. **But beware:** If you connect the LED bulb directly to the 9v battery, it will most likely burn out!