Superhero Facemask

Make your inner superhero come to life by making a mask that will teach you the skills of building how to sew a parallel circuit that will make LEDs turn on.

![Image of a superhero facemask with a star and conductive threads]

**Parts and Materials**

- Star LEDboard \(x2\)
- Conductive Thread
- Battery Board \(x1\)
- Coin Cell Battery \(x1\)
- Felt Pieces
- Elastic Band
- Sewing Thread

**From the kit**

**Additional**
1 PREP

Trace and cut two face mask shapes out of felt or the fabric of your choice. The templates are in the templates folder of this guide.

2 PLAN YOUR CIRCUIT

This circuit contains two LEDs, a battery, and a batteryboard. The snaps are made of conductive metal, meaning electricity can flow through them when they touch. In the circuit, the snaps act as a switch to turn the light off and on.

3 ATTACH THE LEDBOARD

Thread your needle with conductive thread. We recommend doubling the thread for a stronger electric connection.

Attach the LEDboard to the felt by holding it in place on the fabric and looping around the positive pad 3 - 5 times.

Use a running stitch to connect the positive pad on the second LEDboard. Sew around the second pad, secure with a knot, and trim the extra thread.

Repeat this process to connect the positive holes.
**ATTACH THE BATTERYBOARD**

Using conductive thread again, attach the batteryboard (without a battery) to the back of the mask. Make sure the “+” and “-” pads on the batteryboard are aligned with the LEDboards.

To make the components extra secure, you can sew the extra sew-holes to the felt with non-conductive thread.

**MAKE IT WEARABLE**

Using glue, attach the second piece of felt to the back of the mask. Make sure you can still access the batteryboard to eventually remove or change out the battery.

Cut a small hole on each side of the facemask and tie the elastic in one end. Hold the mask to your face, bring the elastic around the back of your head, and mark the elastic where it meets the other hole. Loop the elastic through the second hole and tie a knot to secure it.

**WEAR AND TEST**

Insert the battery- the LEDs should light up!
Now try it on!