Origami Circuit Shapes (Cylinder)

Create a cool, backlit 3-D geometric figure with our printable template and some basic components from your Origami or Paper circuits kit!

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INTRODUCTION

Create a cool, backlit 3-D geometric figure with our printable template and some basic components from your Origami or Paper circuits kit!

TOOLS:

- Scissors (1)
- Hole Punch (1)
- Hot Glue Gun (1)
- Ruler (1)
- Markers (1)
  assorted

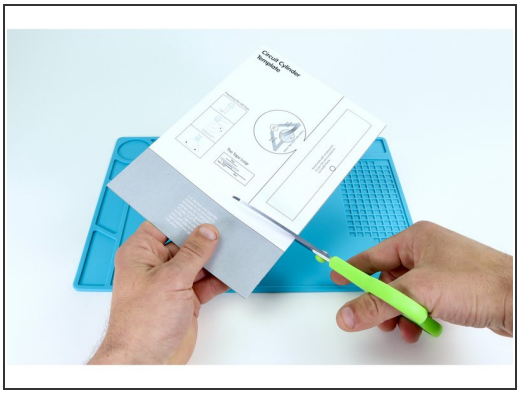
PARTS:

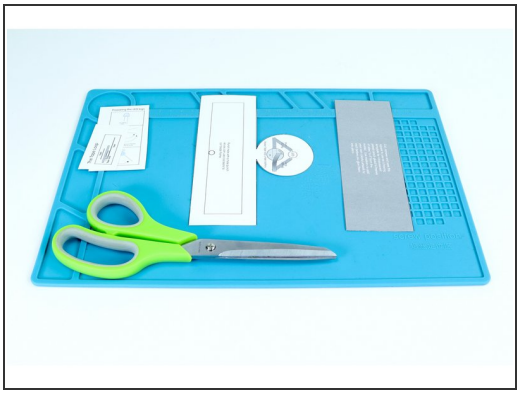
- Maker Tape (1)
  1/4" Wide
- Jumbo 10mm Diffused LED (1)
- CR2032 Battery (1)
- Printable Template (1)
- Tracing Paper (1)
- Clear Tape (1)

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Step 1 — Gather materials and cut template







- **Gather the materials and tools indicated. Note:** this template is included in the Origami Circuits Classroom set. If you don't have this kit, print the file found at the bottom of this guide (we recommend heavy card stock).
- **Use a scissors to cut out** the flattened cylinder shape as well as the gray rectangle and the diagrams for the tape loop and LED prep (you may like to reference them in later steps).

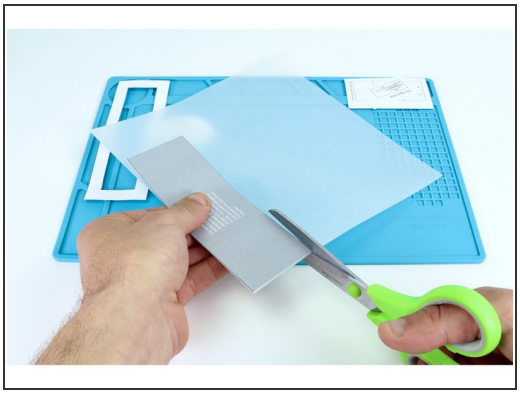
Step 2 — Prepare frames

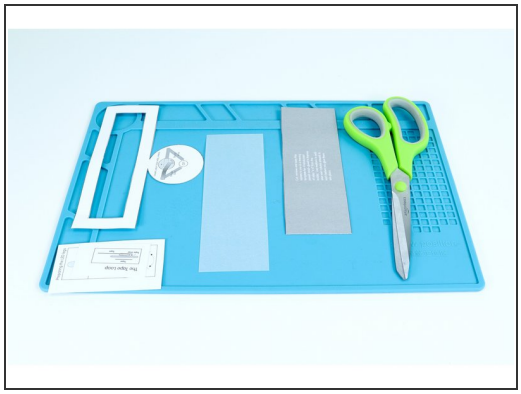




- **Use a hole punch to punch out the hole indicated**.
- **Use the hole you just punched to allow you to more easily use a scissors to cut and remove** the rectangle from the face as indicated.
- **When finished, that long solid rectangular face will become a tidy "frame".**

Step 3 — Prepare colored panels



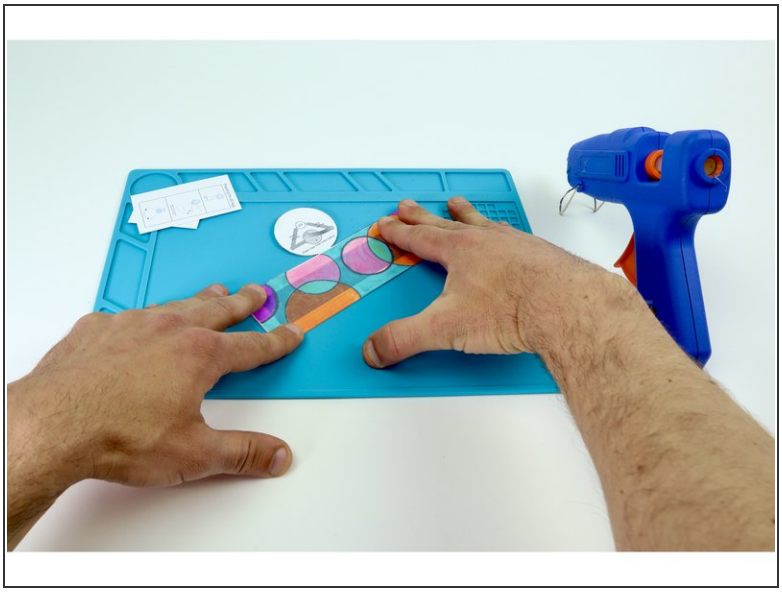




- **Find your sheet of velum, tracing paper or copy paper and use the gray rectangle to help you cut the same shape with a scissors as shown.**
- **Use a black marker to create designs on your tracing paper rectangle that break it up into sections. Then color the sections in** with markers as you wish. Anything goes!

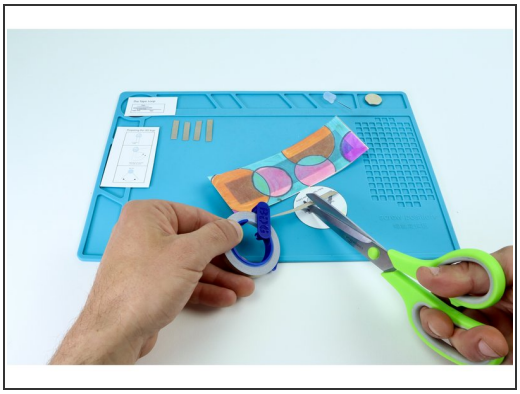
Step 4 — Glue panels and fold faces

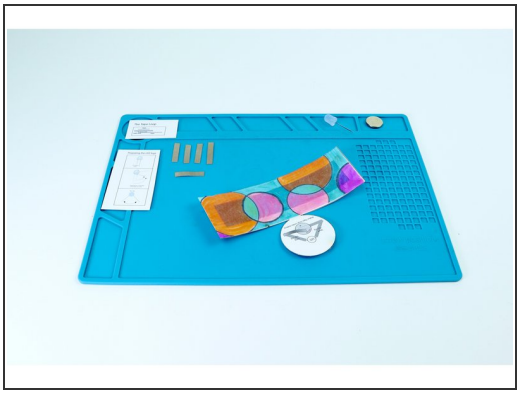




- **Use a hot glue gun to place hot glue on the inside of a frame while pressing the colored rectangle into place on top.** Be sure to be accurate with your placement as each edge will eventually need to be fastened to the next. Overhang can make this tricky.

Step 5 — Prep Maker Tape paths and LED

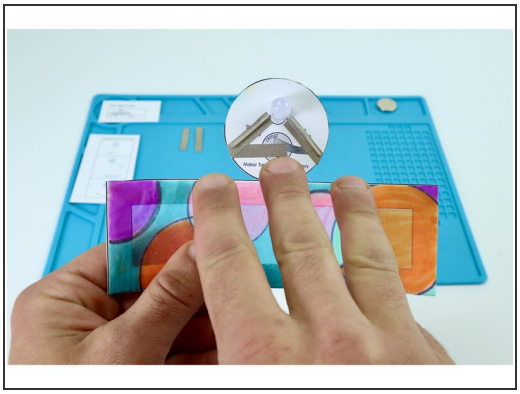
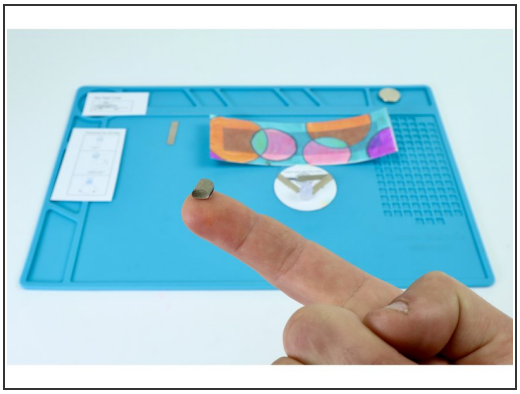
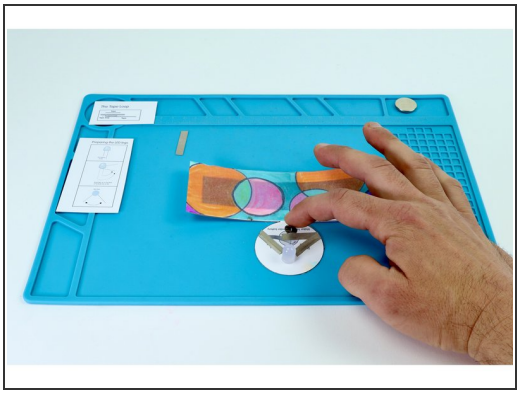






- **Measure and cut the 5 pieces of Maker Tape indicated on the circuit diagram. Remember:** although there are only 4 paths, you will need one tape length to make a tape loop for the battery where indicated on the diagram.
- **Bend the legs of the LED as shown in photo 3 and the diagram you've clipped and saved.** Take care to make these bends so that the LED legs (short and long) are oriented as shown on the circuit diagram.

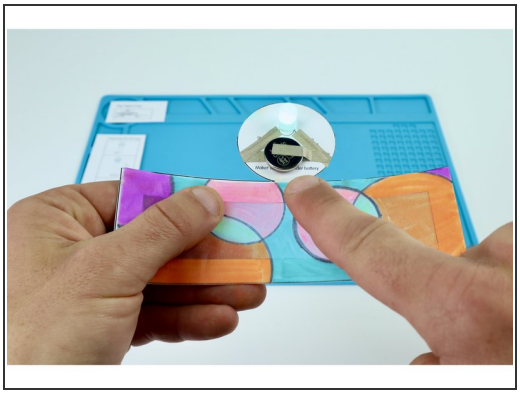
Step 6 — Lay paths and Maker Tape loop

- **Peel and stick the paths shown in photo 1.** This should leave you with two sections of Maker Tape.
- **Use one of your two remaining Maker Tape sections to make a tape loop** as shown.
- **Place that tape loop atop the battery end of the tape path pictured in photo 3.**

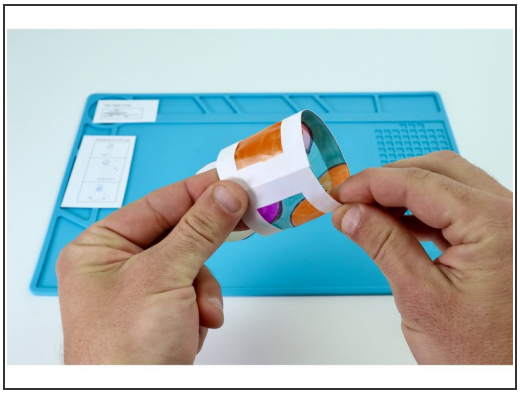
Step 7 — Add battery and complete circuit





- **Place your battery positive (+) side UP atop the tape loop.**
- **To complete the circuit and turn your LED on, peel and stick the final remaining Maker Tape section where shown in photos 2 and 3.**

Step 8 — Fasten edges to create shape


- Using a tape segment that is the same length as the seam created when the two short sides of the rectangle are curled around to meet; **Lay** half of that piece's width on one frame. **Curl** the neighboring side around to match the other edge. **Press** the remaining part of the tape's width to that next frame.
- **Use another couple of smaller tape pieces to close the lid.**
- **And you're done...** Turn off the lights and enjoy your funky, backlit 3D creation!