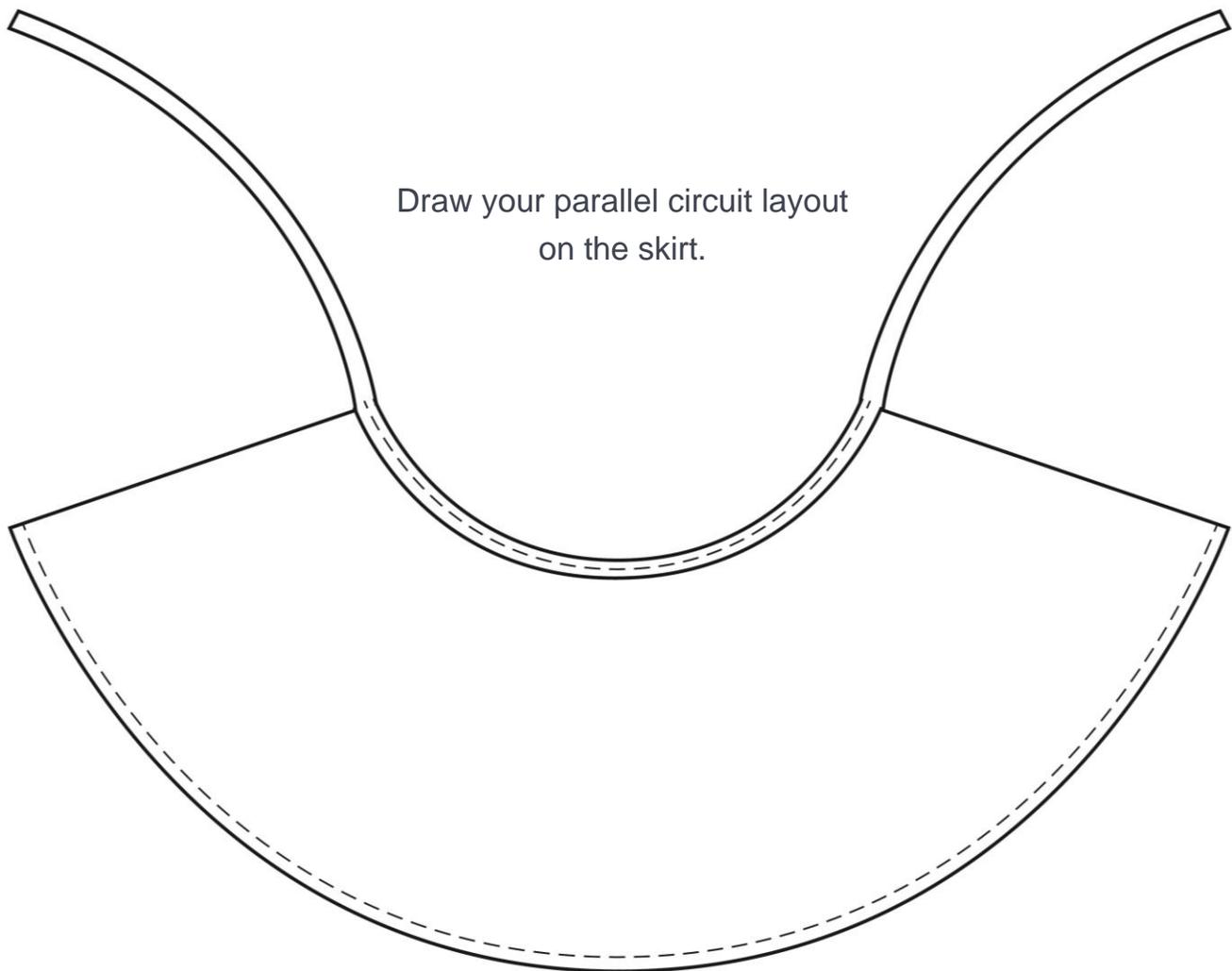
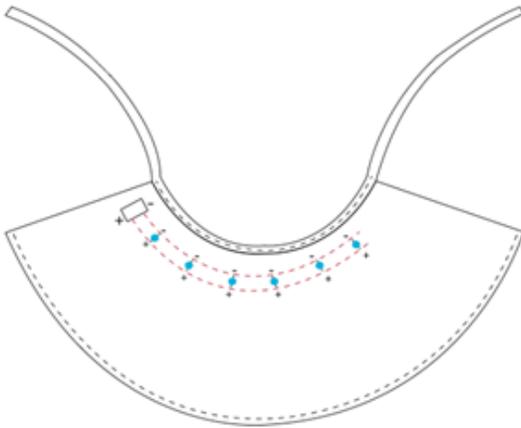


## Adding LEDs to Skirts

**Step 1:** Plan your design. Where do you want lights? Where will the battery go? Sketch your design and circuits. The circuit itself can be part of the design. Mark the polarity.



**Step 2:** Draw your design on the back side (inside) of the skirt using chalk. Mark the location for the LEDs and the battery.



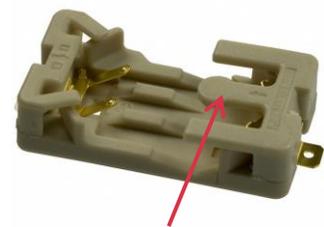
**Step 3:** Draw the lines of the circuit to connect the positive side of the battery to the positive sides of the LEDs. Do the same for the negative side. Remember that the positive and negative trails cannot cross – leave about a ½ inch between them.

**Step 4:** Pull out 8 inches of thread from the needle and bobbin before sewing – do this at the beginning and end of each trail.

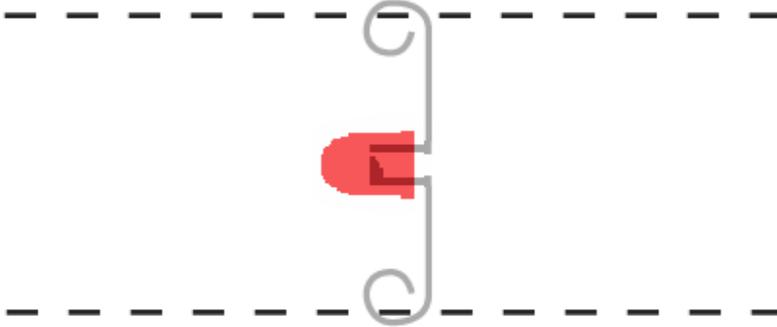
**Step 5:** Stitch so that the backside (inside) of the skirt is facing up. The conductive thread should be in the bobbin and will sew onto the front side of the skirt.

**Step 6:** Sew along the positive line you drew. Do not back tack. Repeat for the negative line. Do not cross trails. The trails should look similar to the picture.

**Step 7:** With a needle, poke the thread tails to the back side of the applique. Find the positive side of the battery holder (the positive side has the three prongs). Insert the tail ends of the thread through the battery holder at either end. Tie a knot at each end to hold it in place. Try to get the knot as close to the fabric as possible.



Positive side



**Step 8:** On the front side of the skirt, insert the LED legs under the conductive thread, but not through the fabric. Make sure the longer leg connects to the positive trail and the shorter leg connects to the negative trail. With needle nose pliers, curl the LED legs around the conductive thread.

**Step 9:** Insert the coin cell battery and wear your LED skirt! Troubleshoot LEDs that are not working.

**Step 10:** Decorate your skirt with ribbon, sequins, or other supplies. If you take apart an artificial flower, the center hole will just fit over an LED.

**Admire your work!**