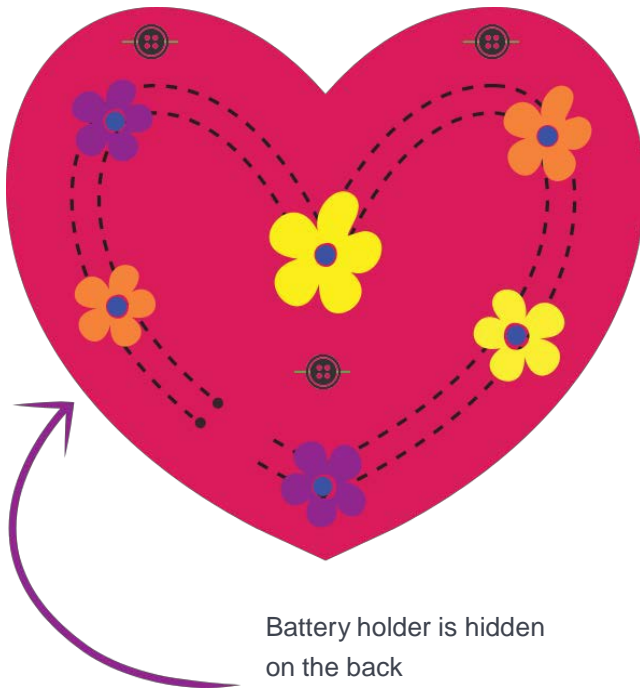


Design your LED Applique

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. Design ideas at the back of your handout can help you get started!

Use this space to plan your idea for the circuit, including the placement of the LEDs & battery.

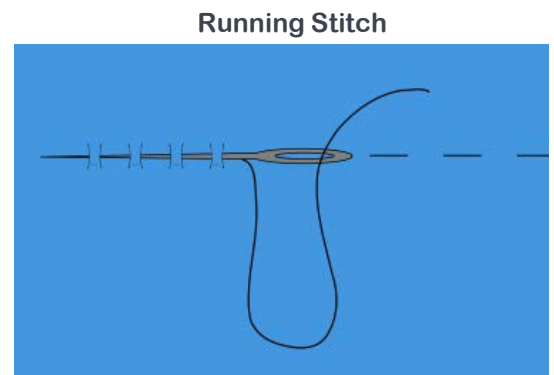


Step 2: On the backside of the applique use chalk to draw your circuit design. Draw parallel positive and negative trails about 1/2 inch apart, never touching or crossing. Remember that your stitched trails start at the battery and end before returning to the battery, as in the illustration here. See examples of other circuit shapes on the last page.

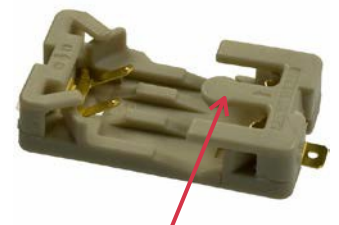
Step 3: Place the battery holder in position on the back of the applique and secure it by

sewing over the knot of conductive thread and through your fabric several times with regular sewing thread, or secure it with glue.

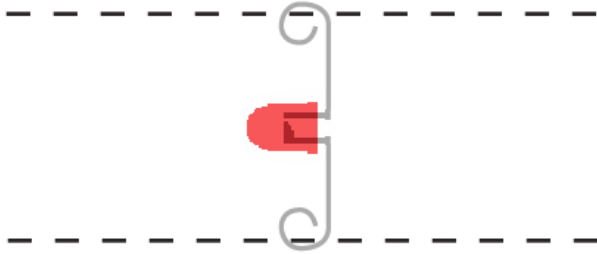
Step 4: Thread one of the conductive threads from the battery holder onto a needle. **Make sure you are sewing with just one ply of thread.** Using a running stitch, sew along one of the marked circuit lines. At the end of the line, knot the thread on the back side of the fabric - same side as the battery pack - and trim close to the knot. Repeat for the second line of stitching, beginning at the other end of the battery holder.



Step 5: Check the battery holder to identify the positive side (the one with 3 plastic prongs, as in the illustration). Put a small chalk mark on the front side of the fabric to indicate the positive line of stitching.



Positive side



Step 6: On the front side of the applique, insert the LED legs under the conductive thread, but not through the fabric. Make sure the longer LED leg connects to the positive trail and the shorter leg connects to the negative trail. With the pliers, curl the LED legs around the conductive thread.

Step 7: Insert the coin cell battery and wear your LED skirt! Troubleshoot LEDs that are not working.

Step 8: Decorate your applique with ribbon, sequins, or whatever you like.

Step 9: Place the applique over your garment where you would like to attach it. Mark the location and hand sew on a button. Cut a slit big enough for the button in your applique. You may need more buttons to secure your applique, sew as many as you need!

Admire your work!

Sample Circuit Stitching Patterns

