LED Valentine's Day Card

Materials Needed

- Card Stock Card Template
- (1) Red LED
- (1) CR2032 Coin Cell Battery
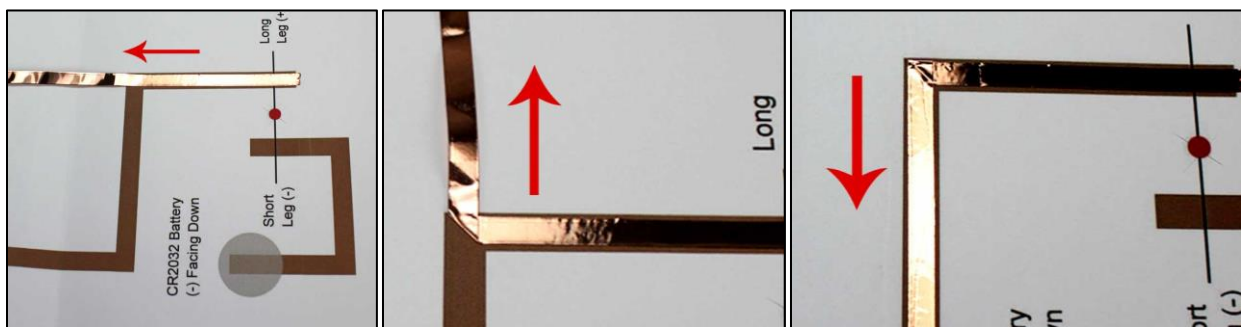- Copper Tape w/ Conductive Adhesive
- Razor

Step 1

Fold your card in half. Using a razor, cut a small "X" in the middle of the heart that the Emoji is blowing as a kiss. When you open the card, the "X" should be directly above the Red circle, where the LED will go.
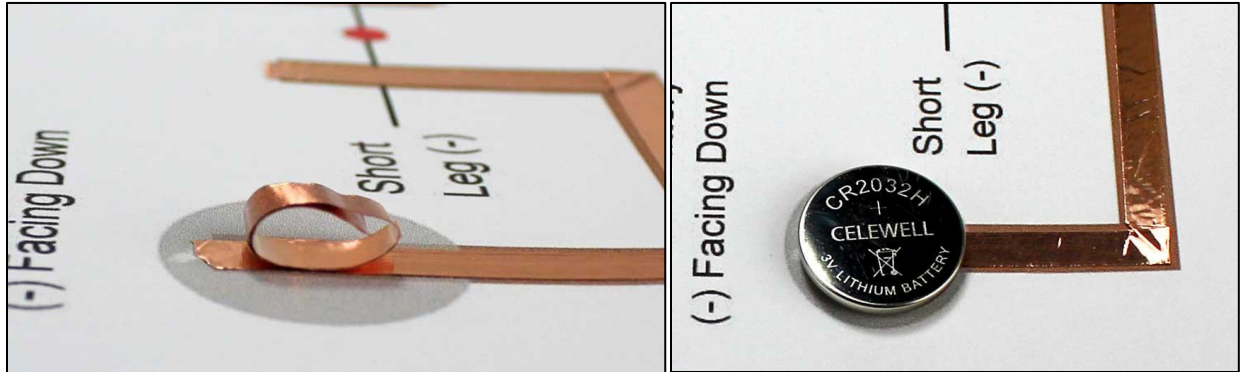
Step 2

Apply the copper tape to all the brown lines on the template. Try to apply a single piece of copper tape versus cutting it at the corners. The continuous piece of copper will help with its conductivity. Begin by applying the copper take in a straight line to the corner. When you get to the corner, fold the copper tape up in the opposite direction in which you are going. Next, use your fingernail to make a line in the copper tape at the corner. Fold the tape straight down along the brown line. Do this with all the circuits on the template. Smooth the copper tape with your finger once it's applied.
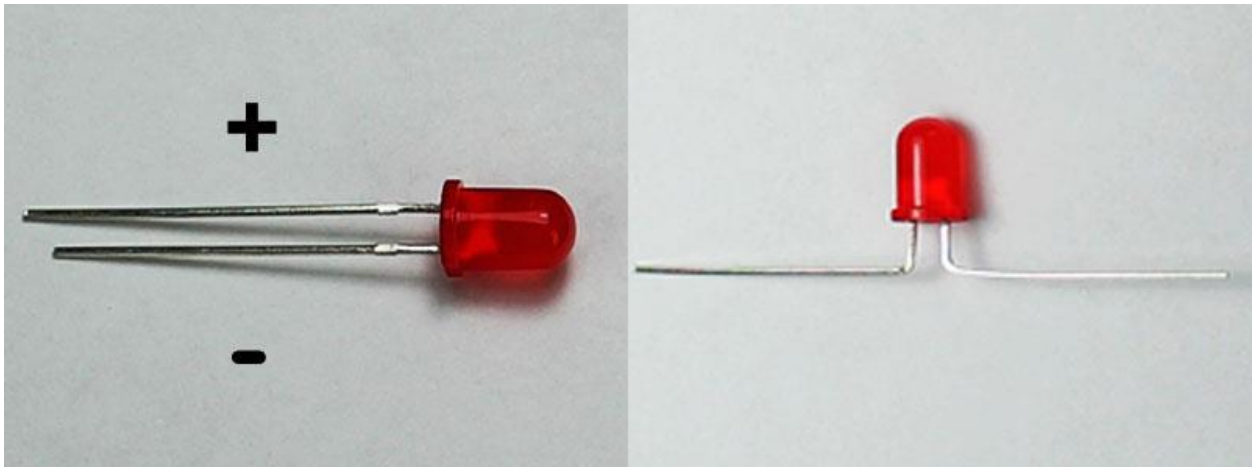
Step 3

Cut a small piece of you copper tape and roll it into a ball with the sticky side facing out. Place the ball on the silver circle of the template. Then, place your CR2032 coin cell battery on top of the copper ball, making sure the negative (-) side is facing down.
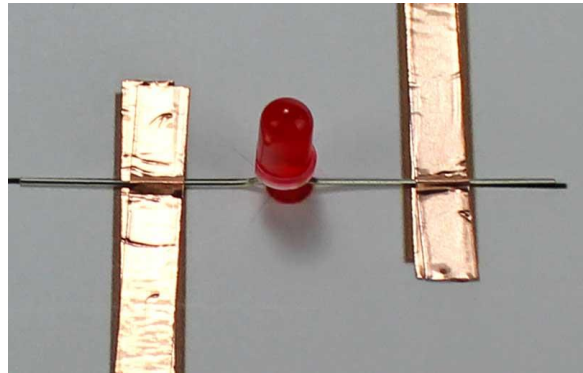

Step 4

Determine which end of you LED is positive (+) and which end is negative (-). The long leg of the LED is the positive (+) side, and the short side is the negative (-) side. Bend both legs at a 90 degree angle, but make sure to remember which leg is positive.

Step 5

Find the red circle on your template and there should be the "X" that you cut earlier Place the LED on top of the red circle and the "X". Use copper tape to secure each leg to the copper tape below. Remember to put the long leg of the LED on the side marked (+). Rub the copper take to ensure everything is making firm contact.
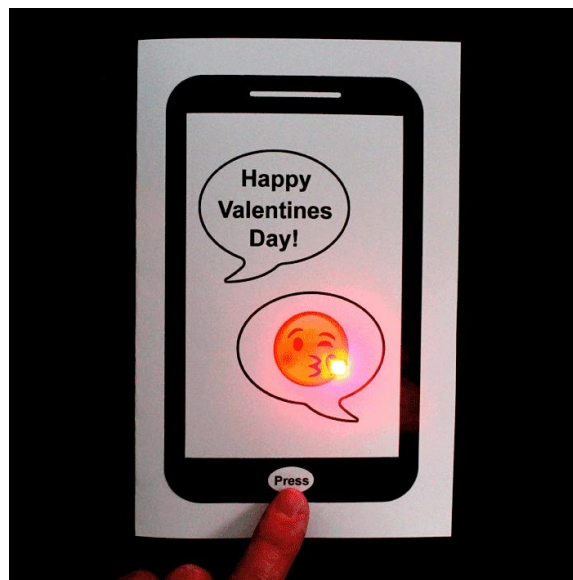

Step 6

Fold the card in half and the LED should fit right through the "X" you cut. Push the "press" button on the card and it should light up by completing the circuit.

If you have any issues, try the following:

1. Make sure the negative side of the battery is facing DOWN on the template.
2. Ensure the long leg of the LED is on the side marked (+).

Complete! Enjoy you LED Valentine's Day Card!

*Instructions adapted from makerspaces.com