Origami Firefly

Materials:

- Origami paper
- 3V coin-cell battery (CR2032)
- Copper Tape
- Pencil
- Tape
- Card stock 1”x2”
- LED Light x 1
- Scissors

**Step 1:** Orient the origami paper like a diamond (colour side facing down). Fold up the bottom half so the peaks meet at the top.

**Step 2:** Fold up the two bottom corners so they meet at the top. Your paper should look like a smaller diamond now.

**Step 3:** Fold the same two flaps down, folding them in the middle, so that the corners point away from each other. The line of your fold will not be straight across. These are the wings of your firefly.

**Step 4:** Pick up the top layer of paper at the unfolded tip (above the wings) and fold down, so that the bug’s “butt” can still be seen.

Then fold down the bottom layer of the tip to cover about ¾ of the top layer that you folded at the start of Step 4.

**Step 5:** Finally, bend the two sides to the back (on an angle, as shown). Tape in place. The taped side will be the bottom of your firefly.
LED Circuit Instructions

**Step 1:** Fold the 1” x 2” piece of cardstock in half. Flatten it out. With a pencil, trace around the battery on each half, as shown. Mark one circle with a plus (+) sign and the other with a negative (-) sign.

**Step 2:** Tape the negative side of the battery holder to the back of the firefly.

**Step 3:** Test your light and battery. To do this, touch the positive leg on your LED light to the positive side of the battery. At the same time, touch the negative leg of the LED to the negative side of the battery. If you’re LED lights up, then you are ready to begin!

* On the LED lights, the positive side is the longer leg. The shorter leg represents the negative side.
* On the battery, the positive side should be smooth and have a (+) sign.

**Step 4:** On the negative (-) side of the battery holder, place a piece of copper tape midway through the circle, on the left side. Run the copper tape the length of the bug. Cut it at the bottom.

**Step 5:** On the positive side of the battery holder, place a piece of copper tape that starts on the upper left side of the circle. Place it diagonally to the outer edge of the holder, down the length of the bug, and cut it at the bottom.

**Step 6:** Lay the coin cell battery with the negative side facing the negative side of the battery holder. Fold the cardstock over the battery (so that the positive side of the battery holder aligns with the battery. Secure the battery/battery holder together with tape.

* You want to make sure that the copper tape connected to the positive side of the battery holder **does not** touch the negative side of the battery. You may have to move the battery further to the left to ensure this.

**Step 7:** Flip over the bug and determine where you will place the LED light so that the longer leg touches the copper tape connected to the positive side of the battery holder. The shorter leg will need to touch the copper tape connected to the negative side of the battery holder.

**Step 8:** Once you have selected the position of your light, use the legs of the LED light to pierce through the paper (or use the pencil). Flip over your bug, and position the LED light’s legs to connect with the negative/positive sides of the copper tape. Your bug should light up when the legs are positioned correctly. Secure the legs with some copper tape.

Well done! Your own light-up origami firefly!