



# Felt Red Nosed Reindeer

Make a Red Nosed Reindeer circuit using felt. It can be a fun holiday wearable, an ornament, or just a cool yule decoration.

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## INTRODUCTION

Make a Red Nosed Reindeer circuit using felt. It can be a fun holiday wearable, an ornament, or just a cool yule decoration.

We made ours using stiff felt, but you can also make a paper version using construction paper or regular paper that you color yourself!

You can make this project (and many more) with our **Wearable Circuits Kit** or our **Paper Circuits Kit**.

### TOOLS:

- [Scissors](#) (1)
- [Glue](#) (1)
- [Safety Pin](#) (1)

### PARTS:

- [Wearable Circuits Kit](#) (1)
- [Felt](#) (1)
- [Painter's Tape](#) (1)

## Step 1 — Gather Your Materials



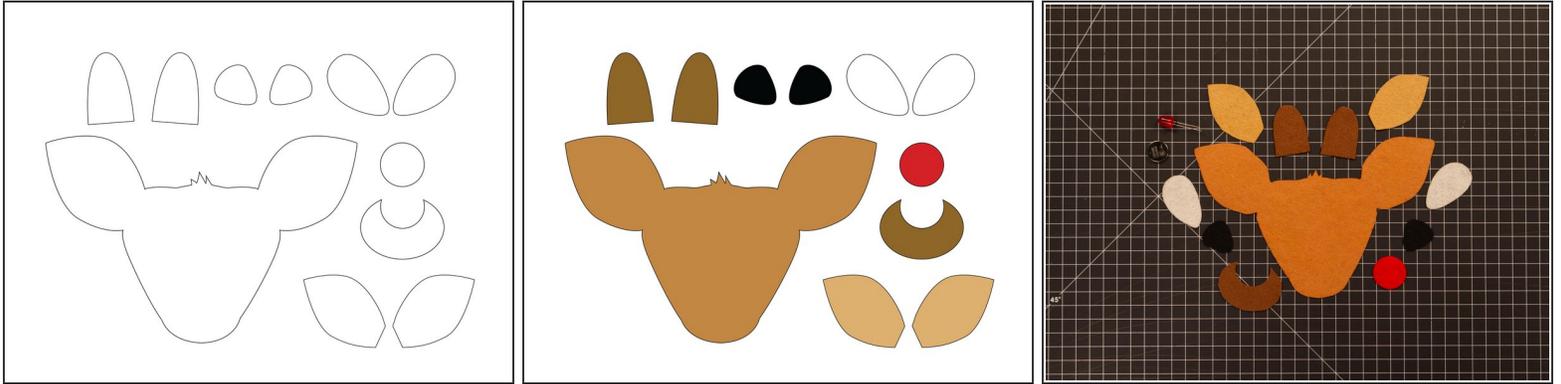
- For this project we're going to use stiff felt, one Jumbo 10mm red LED, one CR2032 battery, and some Maker Tape.
- You'll also need a pair of scissors and some glue. (We'll discuss glue in the next step!)
- ⓘ Note: You can opt to make this project using paper instead of felt. Either use colorful construction paper or just color the paper pieces with colored pencils or crayons.

## Step 2 — Choose an Adhesive



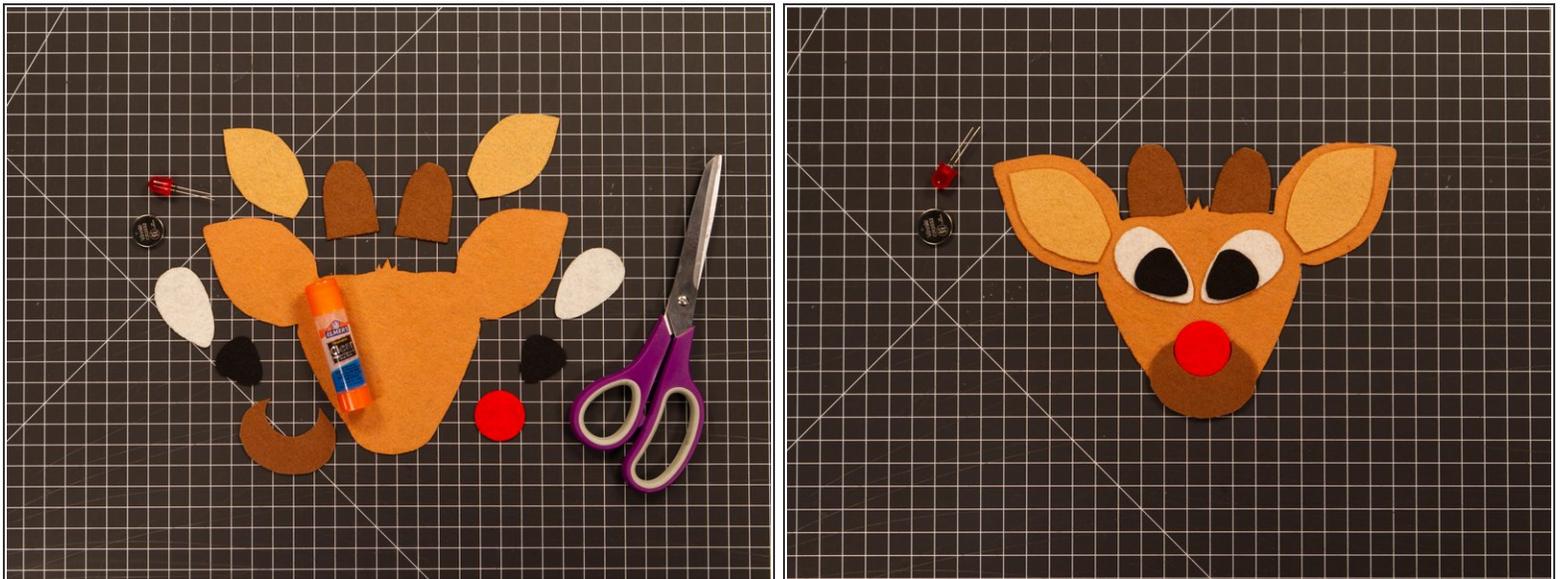
- There are a few options for assembling the reindeer, so let's talk about glue.
  - **White School Glue** is a classic, and everyone seems to have a bottle. It's not great for felt though.
  - **Hot Glue** (and a hot glue gun) works great for adhering felt, but if you're working with kids there's safety to keep in mind. Hot glue burns are no fun!
  - **Spray Glue** is also great for adhering felt, but it's messy and without the proper ventilation we would not recommend it.
  - **Tacky Glue** is another great option for felt. It's not as common as some of the other choices though. (If you do have it, use it!)
  - **Glue Sticks** are pretty common, and can work for felt. It's not the best, but it'll do in a pinch, and it's pretty *kid-friendly*.
- We'll use a Glue Stick for this project and share some tips along the way.

### Step 3 — Print and Cut the Pieces



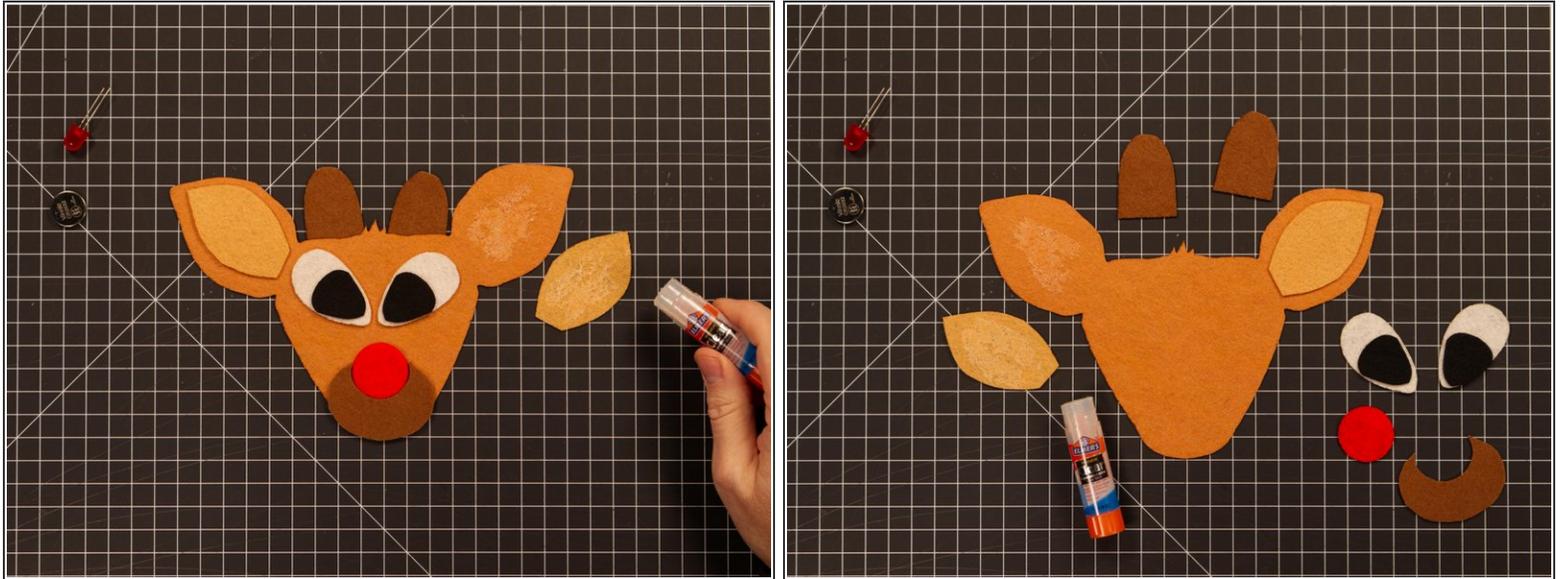
- Print the PDF template pages and then use them to cut out felt pieces for your project.
- If you get a pack of stiff felt you should be able to find black, white, red, and a few shades of brown or tan that will work for the reindeer.
- ⓘ If you have access to a laser cutter it's an awesome way to cut felt! If you wanted to pre-cut a whole bunch of felt for a class or workshop a laser cutter is a great way to do it.

### Step 4 — Prepare for Assembly



- With all of our felt pieces cut out we're ready to start assembling the reindeer.
- We did a "dry fit" of all of our pieces to make sure none were missing and to figure out where everything would go.

## Step 5 — Attach the Ears



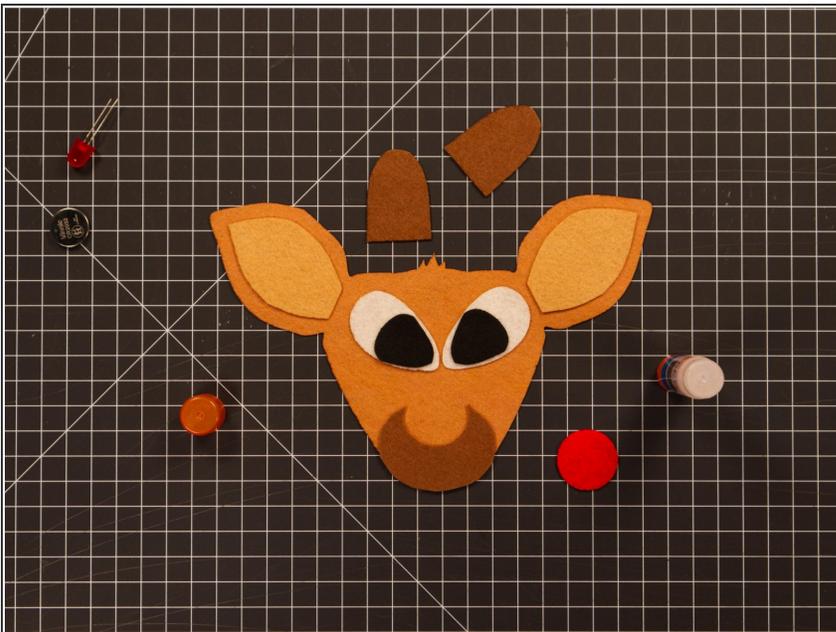
- We found that if you use a glue stick it is very helpful to put a bit of glue on both pieces.
- The glue stick takes a while to dry, so once you stick it down be careful not to let the felt piece move around. (You could help them stay in place with a few small pieces of blue painter's tape.)
- With our glue stick we found that things stuck together really well after letting the glue set overnight.

## Step 6 — Attach the Eyes



- For the eyes you'll need to glue the smaller piece (black felt) to the larger piece (white felt) and then attach them to the face.

## Step 7 — Attach the Muzzle



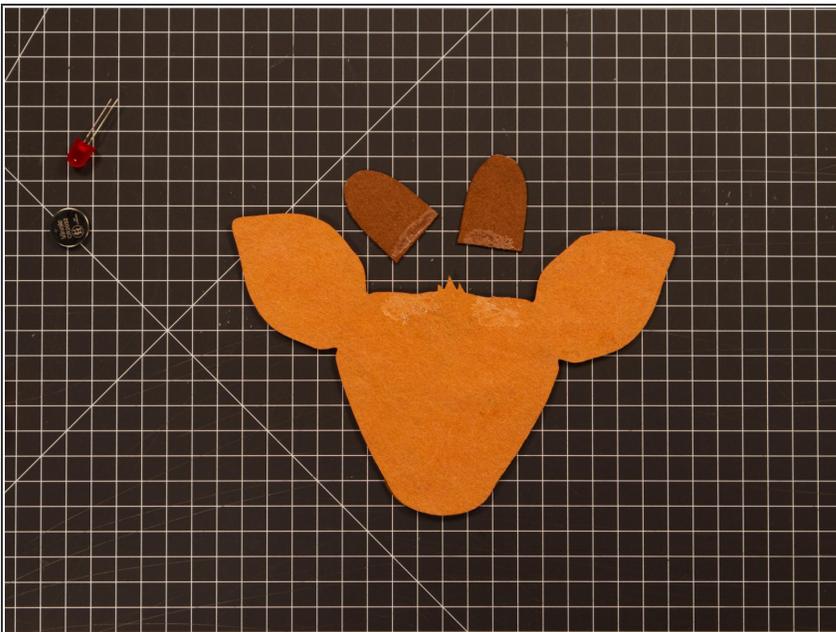
- Glue the muzzle in place. It should line up with the bottom of the face.
- ⓘ Did you notice that all of the pieces are symmetrical? This makes things a bit easier since if you flip a piece over it should still work just fine.

## Step 8 — Attach the Nose



- Finally, let's get that red nose in place! It fits right into the rounded out section of the muzzle.
- That's it for the front! Carefully flip over the reindeer so you can attach the antlers.

## Step 9 — Attach the Antlers

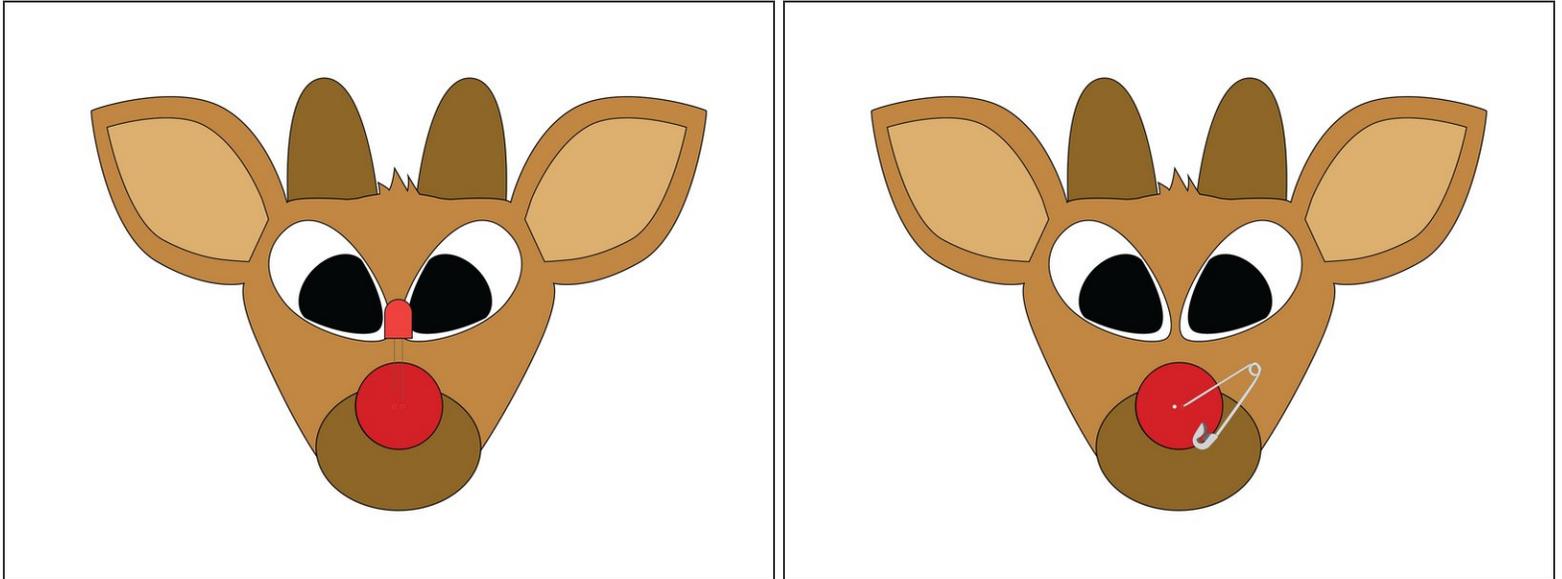


- On the back side add a bit of glue to the area where the antlers will go. Add a bit of glue to the bottom of the antlers as well.
- Stick down the antlers and then flip the reindeer back over to the front side.

**Step 10 — Assembly is Done!**

- With all the felt glued down your reindeer should look like this!
- ☞ Remember that if you are using a glue stick be careful with your reindeer at this point as the glue takes some time to dry.
- Next we'll add the circuit so your reindeer can have a glowing red nose.

## Step 11 — Make Holes for the LED Legs



- We'll need to poke two holes through the felt to put the LED legs through.
- Since we need to go through two layers of felt we recommend using a safety pin or a push pin to make the holes.

**Step 12 — Add the LED**

- Add the LED by pushing the legs through the holes.

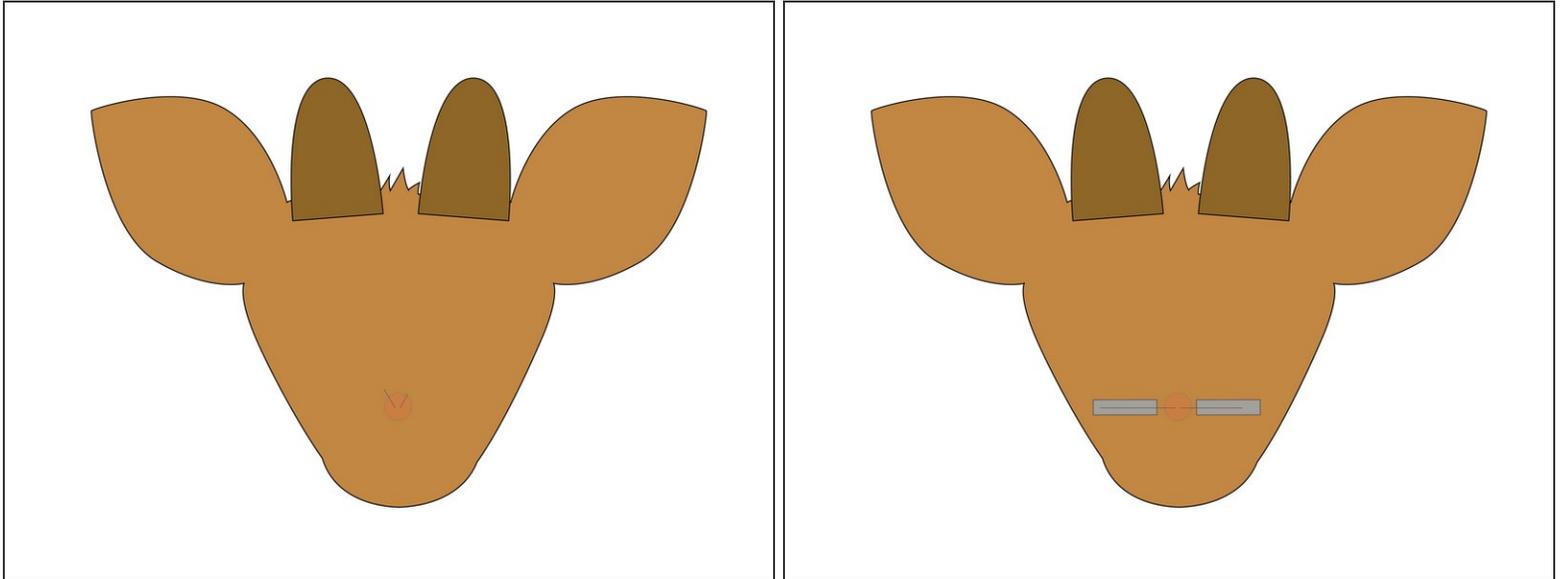
**⚠ Note!** Make sure the longer (positive) leg is on the right side when you put the legs through the holes.

- ☞ With the longer (positive) leg on the right side you'll need to remember that when we flip over the reindeer then the positive leg will be on the left side.

**Step 13 — Check Out the LED!**

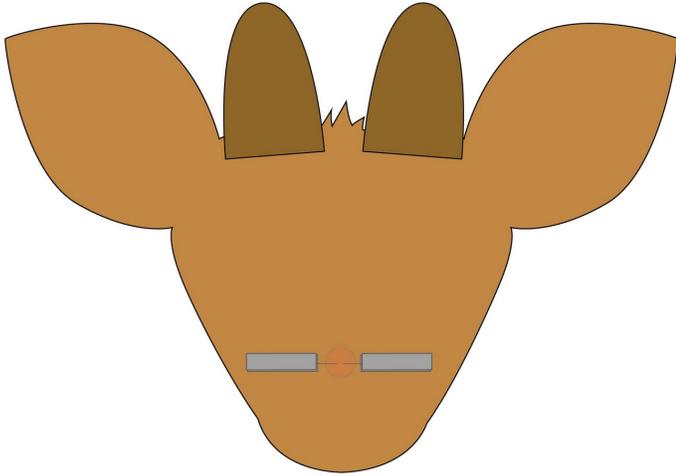
- Here's what your reindeer should look like with the LED in place.
- It should be flush against the felt.

## Step 14 — Bend Down the LED Legs

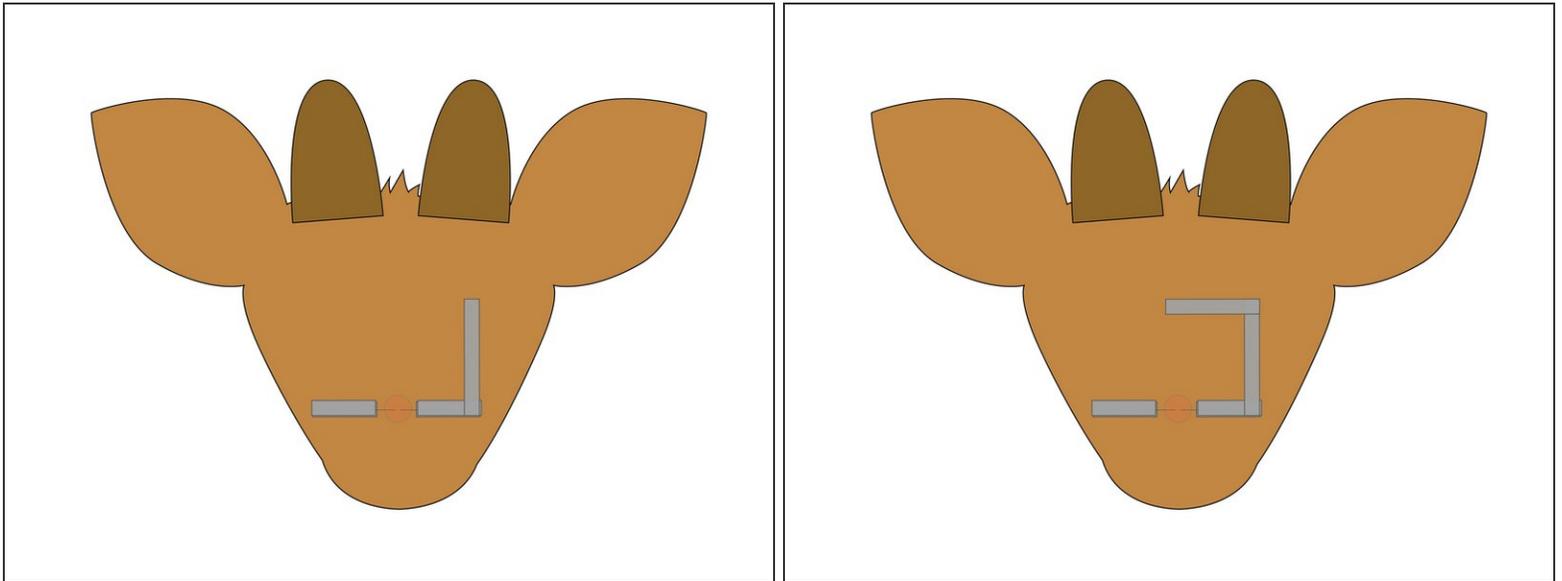


- Flip over your reindeer and you'll see the LED legs sticking straight up. We'll need to bend them down flat, *but before you do that we're going to add two pieces of Maker Tape.*
- Add two pieces of Maker Tape (one for each leg) so that when you bend the legs down they make contact with the tape.
- Two layers of Maker Tape create a "tape sandwich" with the LED legs in the middle. Since the felt isn't as flat as paper this will help create a better electrical connection.

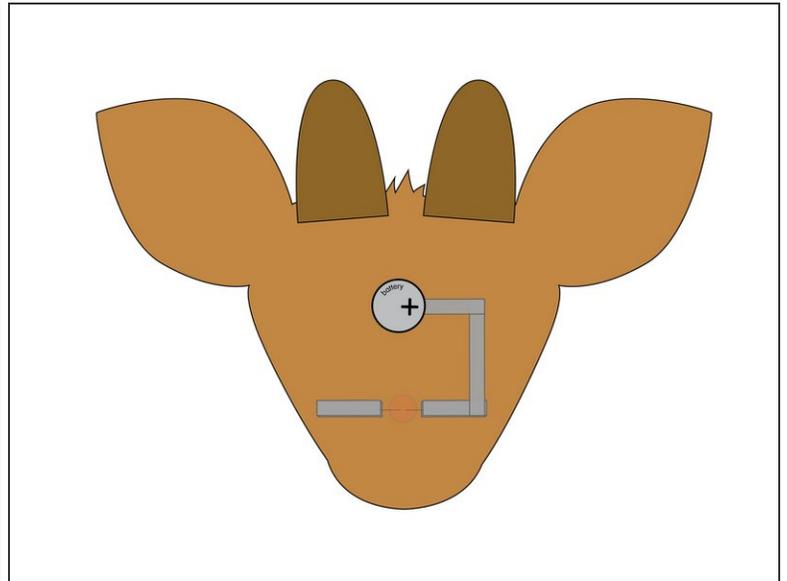
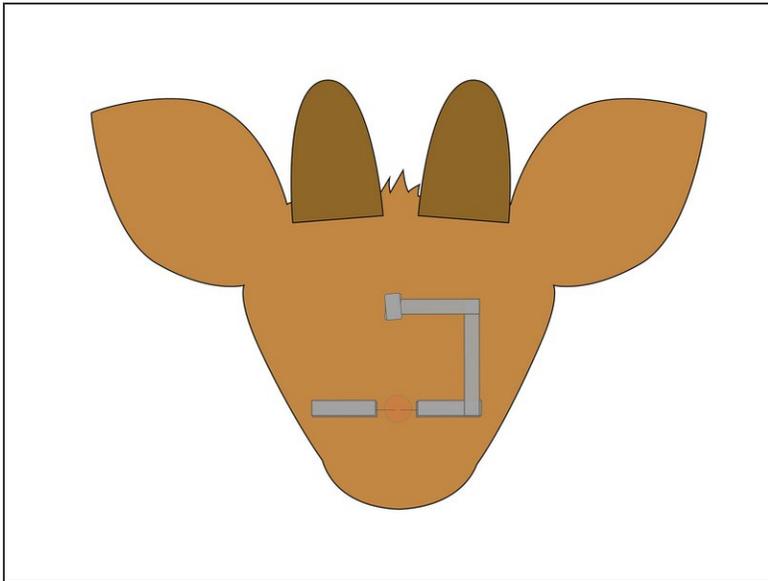
## Step 15 — Secure the LED Legs



- Once the LED legs are flat against the tape, add another layer of Maker Tape over the LED legs.
- We should now have a nice solid electrical connection to the LED legs.

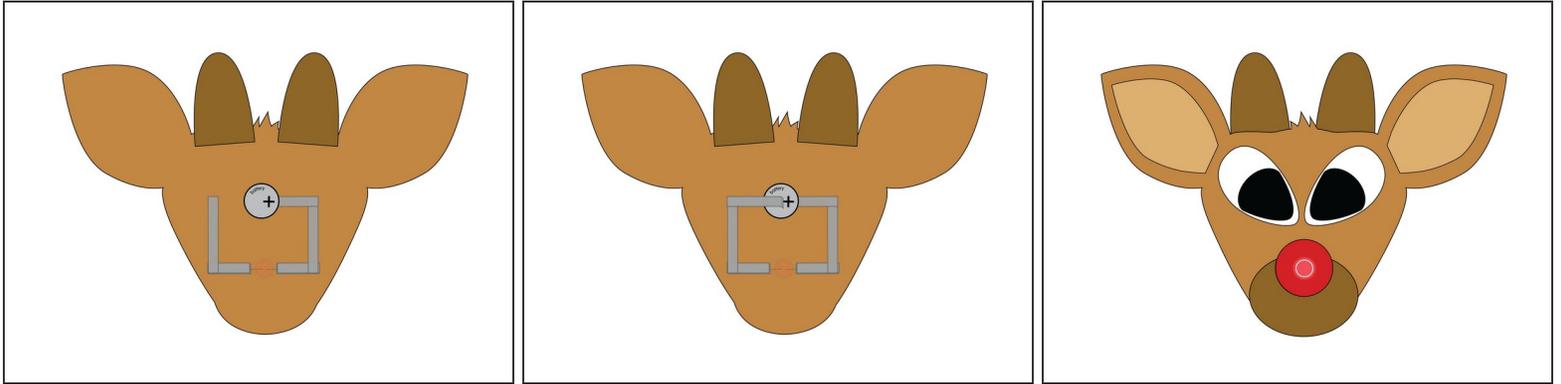
**Step 16 — Add Negative Side Maker Tape**

- Add the negative piece of Maker Tape to the LED leg on the right side. (This will connect the negative leg to the negative side of the battery.)
- ⓘ If you need to use more than one piece of Maker Tape to connect things that's fine. You can overlap Maker Tape and it will still work because it's conductive on both sides and all the way through.

**Step 17 — Add the Tape Loop and Battery**

- Using Maker Tape, create a small tape loop.
- Add the tape loop to the negative piece of tape, then stick the battery down to it.
- ☑ Make sure you stick the negative side of the battery down to the tape loop.

## Step 18 — Add Positive Side Maker Tape



- Add additional pieces of Maker Tape to connect the positive LED leg to the top of the battery.
- Your LED should light up as soon as you connect the tape!

**⚠ If your LED did not light up there are a few things you can try.**

- Check that all of your tape is pressed down securely. If there is a piece not making contact that may prevent your circuit from working.
- Try flipping over the battery. If your LED is reversed you can fix your circuit by flipping the battery upside down to match the polarity of the LED.
- If you want to turn off your circuit you can just peel back the piece of tape touching the top of the battery. Once you "break" the circuit the LED will turn off!

**Step 19 — Enjoy!**

- Enjoy your Felt Red Nosed Reindeer!
- You can easily safety pin your reindeer to your clothing, or hang it on your Christmas tree as an ornament.
- What other ways can you decorate with your new Felt Red Nosed Reindeer?