## **DIY Harry Potter Wand**

The first step is to choose the colors for your craft sticks. Use two colors. Your outer sticks are one color and the insulating stick is a different color. It makes it easier to keep track of where you need to place the copper tape.

Start by wrapping a strip of copper tape around the craft stick approximately where you want your on/off switch. Make a ring of copper tape all the way around the craft stick. Then leave about a child's finger width of space and wrap another strip of copper tape all the way around the craft stick.

Now on one side run a strip of copper tape from the bottom ring to the end of the stick. Repeat from the top ring to the other end of the stick. Make sure you leave the finger width space between the rings with no copper tape. This is your circuit break.

## Supplies

- 3 Craft Sticks
- · 1 roll Copper Tape
- · 1 LED Light Bulb
- 1 CR2032 Battery
- · Electrical Tape
- Scissors

When you are working with copper tape, you will find that it tends to roll and stick back on itself. Sometimes it works best with long pieces to leave the paper on part of the tape and slowly unroll it as you stick it down.



On the other outer craft stick run a strip of copper tape along the entire length. Here is a picture of all the sticks with copper tape, we will get to the little piece in a moment!

Before you place your LED light make sure you test it! Do this by sliding the battery between the legs of your LED light. If the light doesn't come on, flip the battery around and try again. Still doesn't work? Grab a different LED and test that one. Still not working? Try another battery. Make sure everything works before you start the next step.

Using copper tape, attach the LED light to the end of the outer craft stick with copper tape running the entire length. Tape the LED leg to the copper tape.

Repeat on the other outer craft stick, making sure to tape the other LED leg to the copper tape on the craft stick. Secure the legs well with copper tape to ensure your circuits will work.

Using scissors cut about an inch off the end of your middle craft stick. Cut off just enough so that your battery will fit in. Slide the long part of the middle stick between the two outer sticks.

Add a piece of copper tape to one side of the small piece of craft stick you just cut off the middle piece. Using electrical tape, create a hinge and attach the piece so it will cover the gap between the rings on the outside of the craft stick.

Slide the battery in. Test to make sure it is the correct way and your wand works.

Now tape your wand together! Add a piece of tape to the top to secure the three craft sticks together. Then add more tape at the bottom starting at the bottom of the on/off switch all the way to the end securing the battery in place.

To turn on your wand simply close the flap securely with your thumb.

All done playing, simply take your thumb off the switch and your circuit breaks and the light turns off.