



# MINI LED WODEN CANDLE

## ABSTRACT

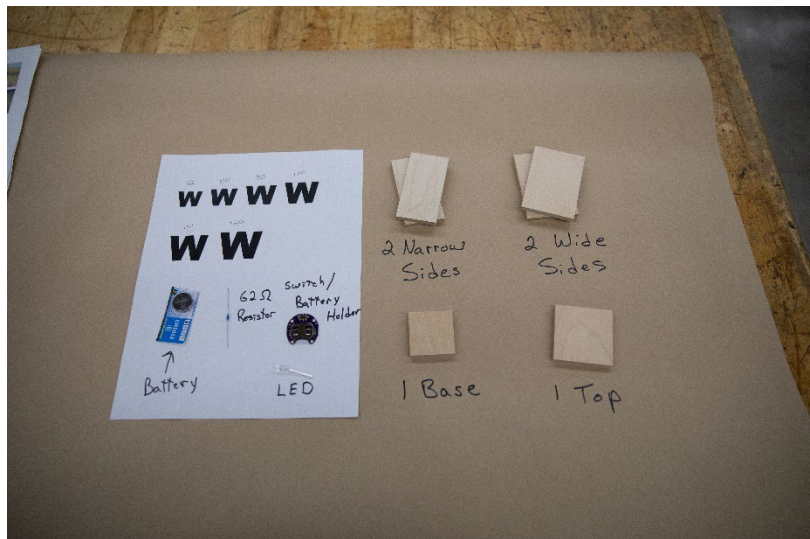
You are going to create a mini candle. You will use pre-cut pieces of wood to assemble the candle. You will use a hand saw to cut a letter in one side of the candle. You will assemble and solder the electronic components.

Mr. Chopin

Intro to Technology



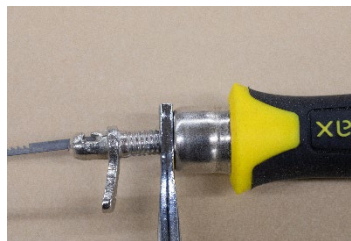
You will need 2 narrow sides and 2 wide sides, along with 1 base and 1 top.



Print out the first letter of your last name. Around 90 size font works best. The larger the better, it will also be helpful to make the letter BOLD.



Use about a 1/4 inch drill bit. Drill a hole that is completely inside your letter.



Remove the blade of the Coping saw by unscrewing the handle while holding the small lever near the handle. It should be loosened about as much as the picture shows.

Pull the two sides of the saw together to remove the blade and insert your part. Tighten the saw again. Cut out your design carefully.



Use a small file to clean up any of the edges of your letter.

You will assemble the candle according to the picture on the right.



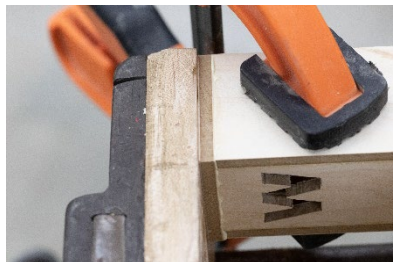


Use a small amount of glue on the edges of the narrow sides as shown in the picture.

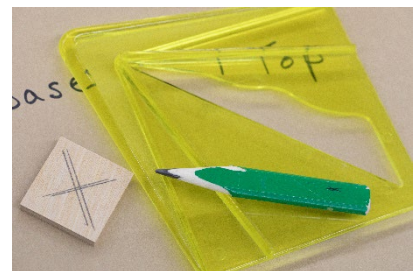
Carefully align all the edges so they are as flush as possible, and put a clamp on the candle to hold the sides together.



You can use another clamp, or a bench vice to clamp the top on the candle. Make sure you use a wet paper towel to clean up any extra glue. It is easier to do it now, than later.

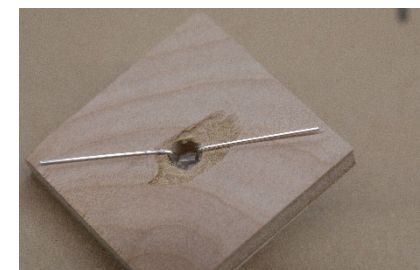


Using a square or the center finder, draw lines on the base to find the center of it. This is where the hole needs to be drilled for the LED.



Using a #1 Drill bit, drill a hole in the center of the base.

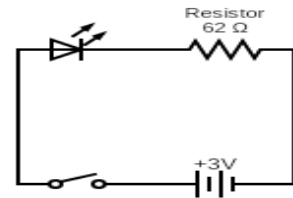
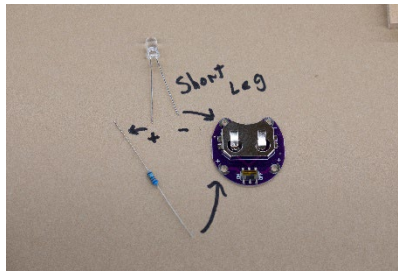
Bend the legs of the LED and place it in the hole.



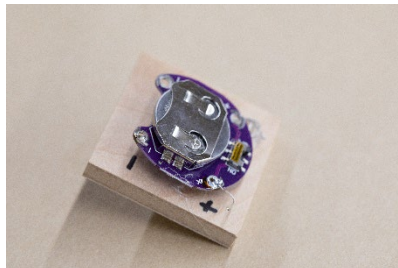
Using hot glue, secure the LED in the base and add a little extra to help the look of the candle effect.



Make sure you connect the battery – to the short leg of the LED. The resistor should be on the + side. You can use a little bit of hot glue to secure the resistor after you solder it to the long leg of the LED.



You can draw the + and – on the wood for your reference. You will then connect the battery holder with battery to the resistor and short leg of the LED.



Using 120 and 220 sand paper, sand you candle so it is smooth on all sides, and there is no glue left on the sides.



Sand and make sure the base fits inside the candle. Once it fits, use a small amount of glue to secure it in the bottom of the candle around 3/4 of an inch deep.

