



## Cubicle Model With Working White Board



by rabbitcreek

With a new job a long time ago came a present from my young daughter. A small model of the cubicle I was ensconced in--perhaps inspired by bring your kid to work day. Well, with retirement and my daughter now ensconced in a box of her own I went to work with a 3D printer. She had related how she had been upgraded to a cubicle "with a window!" So the model would require a working window with view that

converted to a white board to make it interesting.

I have included most of the STL files but the key to making one of these fetish objects is of course personalizing it to the occupant. Her job requires the use of many mice and various DNA scripts so a DNA hat rack and tiny occupants were also included.



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## Step 1: Gather Your Materials

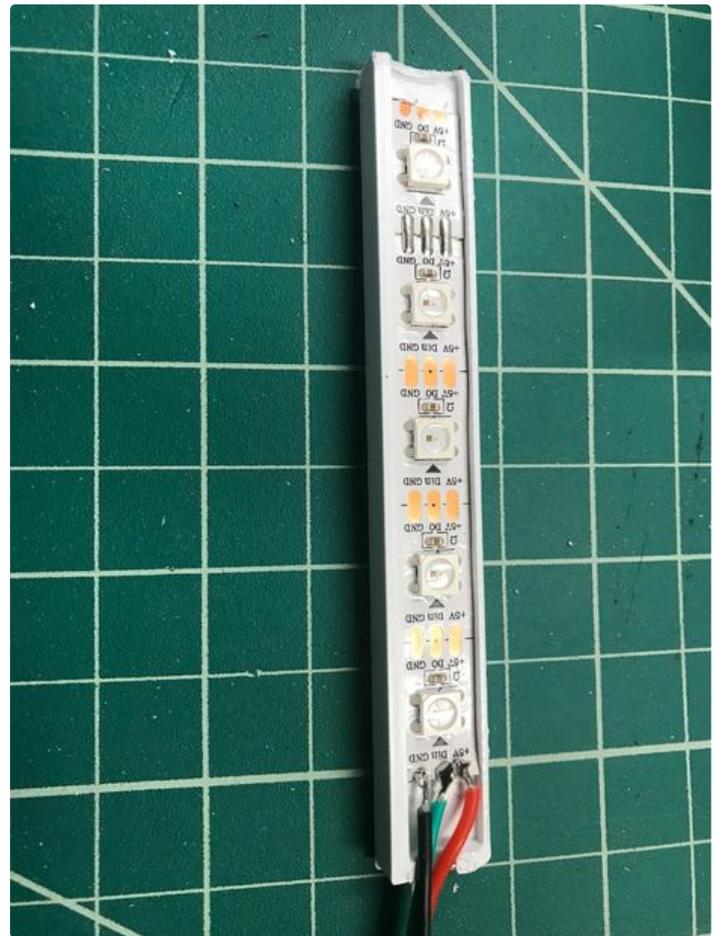
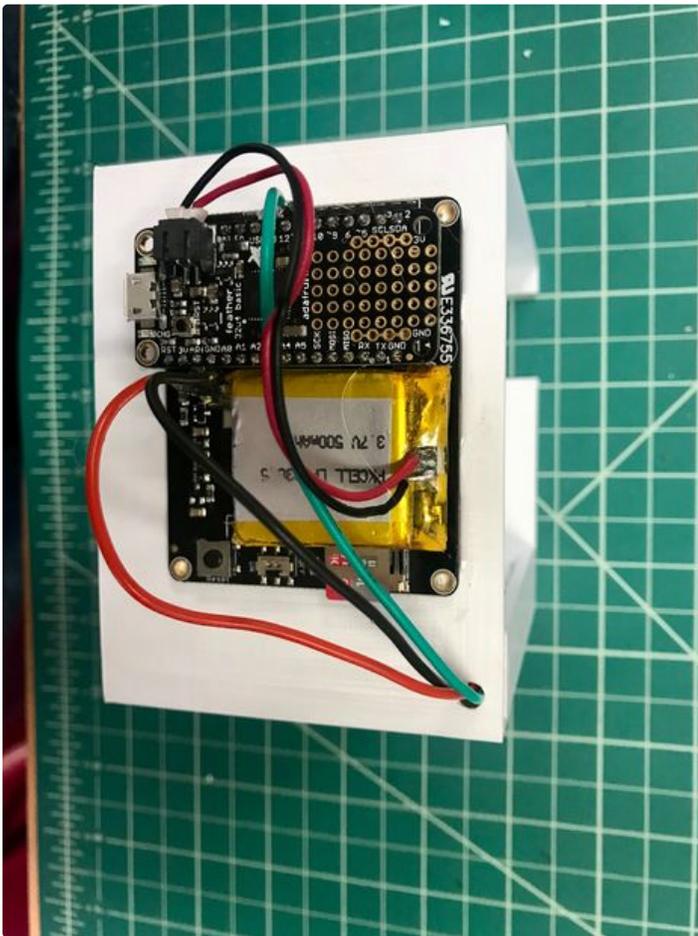
This is a very easy Instructable to make. It requires very little wiring as most of the connections are done by a Feather Header system. You only have to add a small set of Neopixels and a Lipo battery to make the system go.

1. TFT FeatherWing - 2.4" 320x240 Touchscreen For All Feathers--Adafruit

2. Adafruit Feather 32u4 Basic Proto

3. NeoPixel Stick - 5 x --or just cut off a small section of neopixels from a strip of them

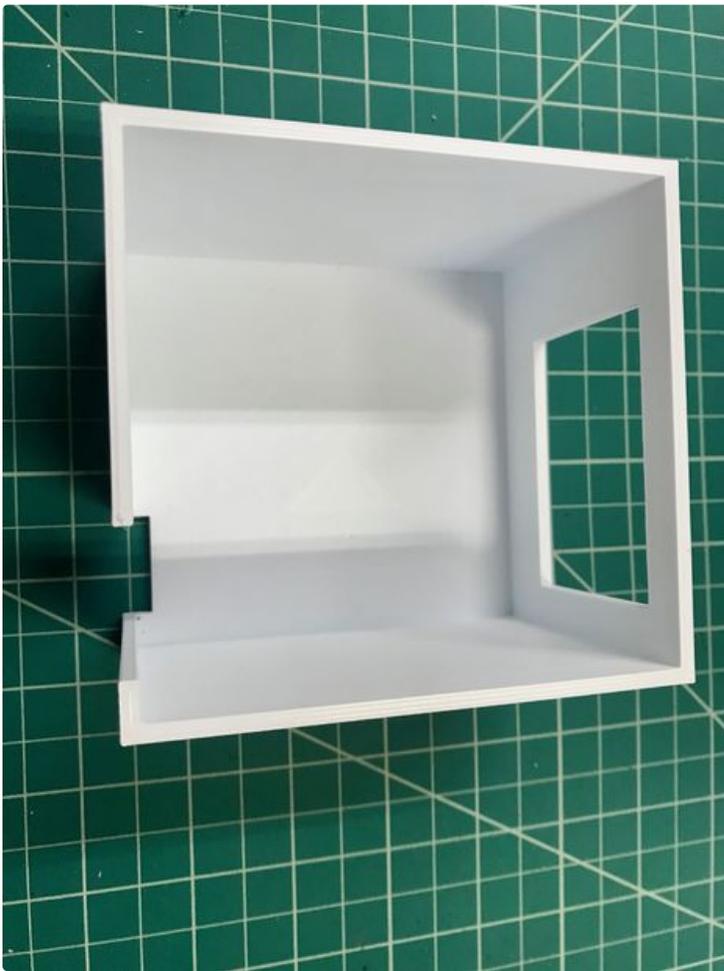
4. Lipo battery--I was using a 500 size one and it easily powered it for a couple hours...



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## Step 2: Build It

Here are all the files for the cubicle. Just 3D print them to whatever size you want to use. The window size is designed to fit the TFT screen perfectly. I printed them all in white PLA and it worked well.

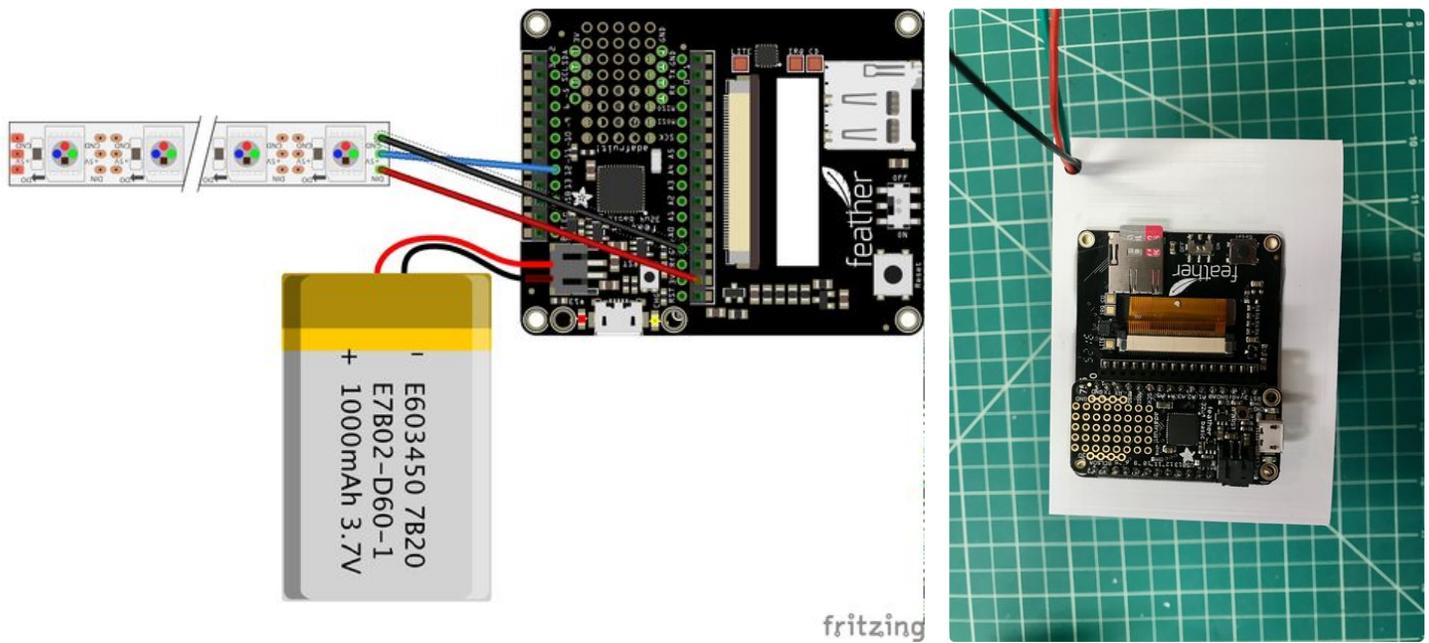


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### Step 3: Wire It

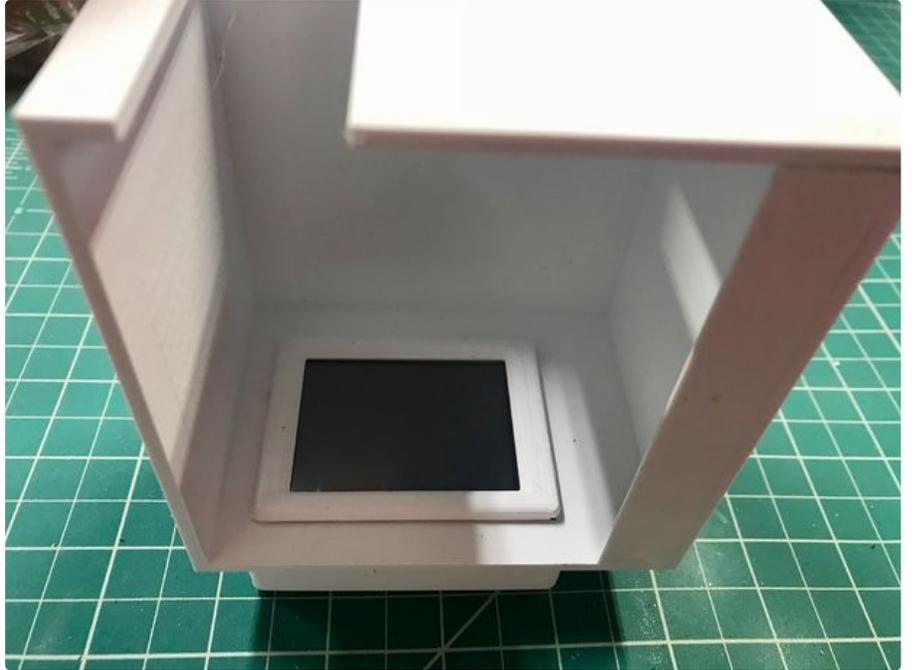
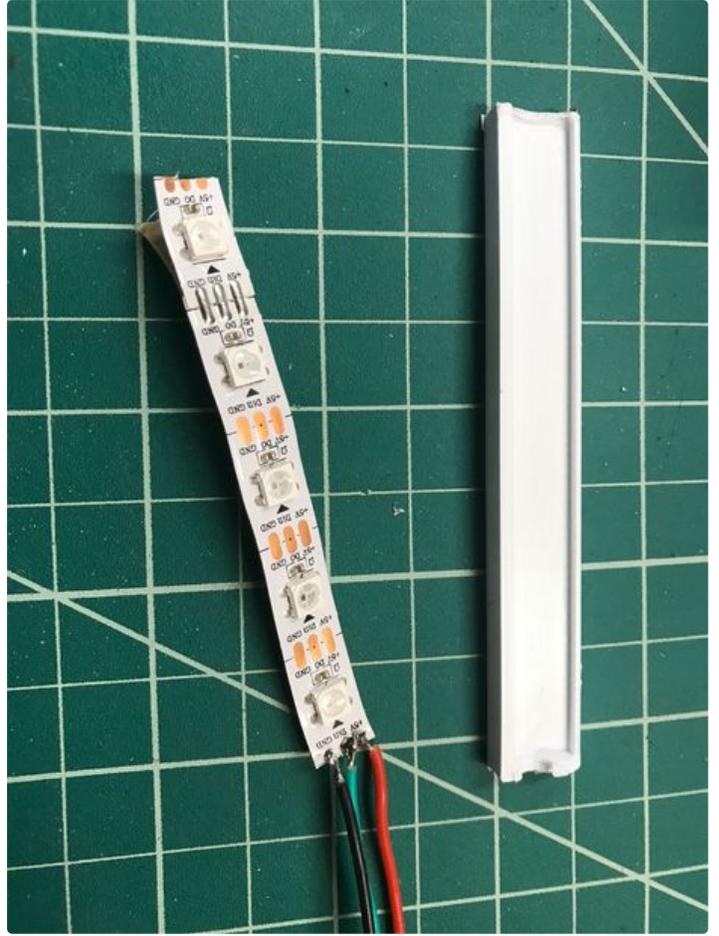
There really isn't much to the wiring of this thing. Plug the Feather into the TFT screen after you solder on the headers. I used pin 12 as the output for the Neopixels but there are a variety of other ways of doing this. Power was obtained from the 3 volt line on the board as this allowed the enable off switch on the

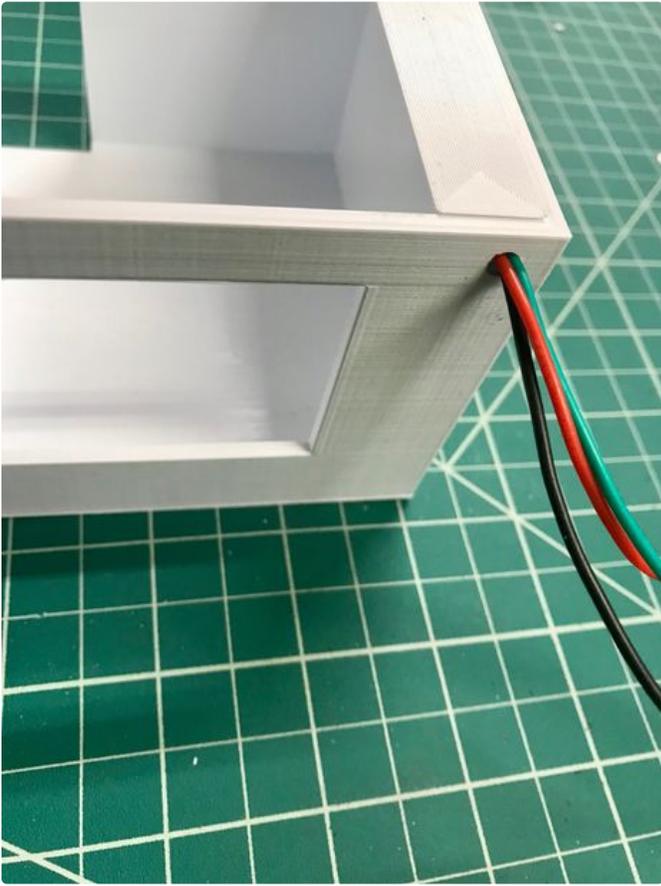
TFT board to turn off the lights and the computer to allow charging. The lipo battery is just plugged into the JST connector on the board and the wires hot glued into place.



#### Step 4: Assembly

Most everything was easily glued into place. The light bar above the desk holds the neopixel strip and the three wires are led out through a hole in the back to the main board. This is secured in the window with glue and the window frame is applied on top. Covers for the main board and wiring are included. The desk and chair are glued in too, but of course the final arrangement of material wealth is up to you.





## Step 5: Programming

The program fills just about all the memory in the feather so be careful changing much. It uses a picture stored on the SD card to present on the window: "P10.BMP" so just label your own photo on the SD card for the feather. You will have to obtain a photo of whatever is out the cubby window and place it on the card. It has to be reduced in size and stored in a BMP format--just follow the instructions on the Adafruit web

page for displaying photos with the device. It works flawlessly. When the screen is pressed it switches to the white board and displays three choices of dots--one blue, one red and one an eraser dot for correcting tiny mistakes in your DNA sequence. The software is basically adapted from the TFT touchscreen demo but adapted for the white board interface.



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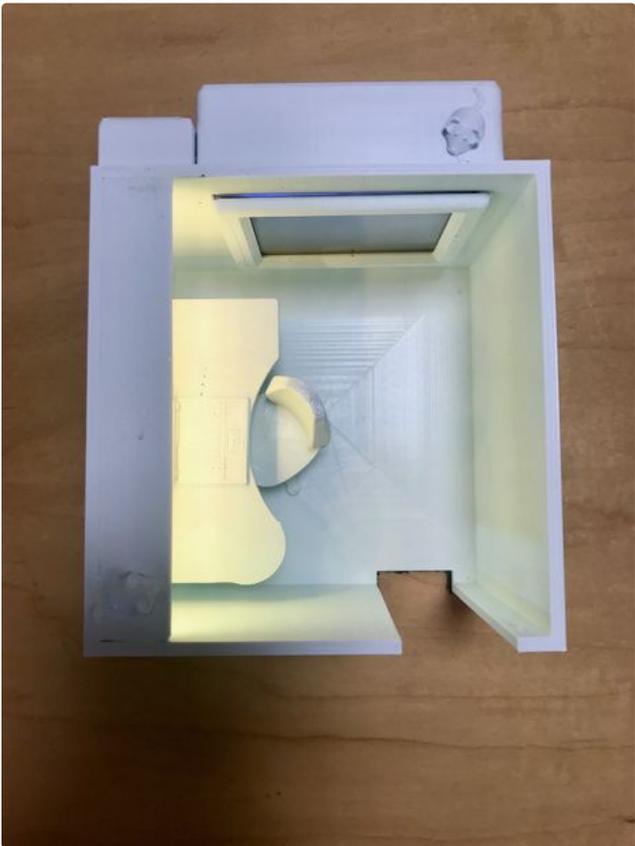
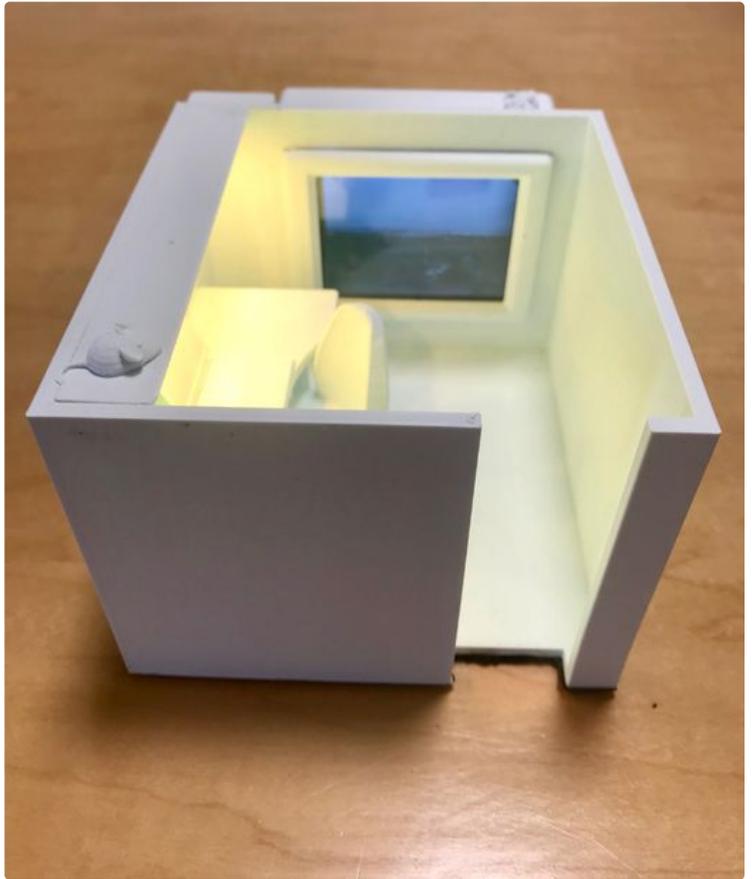
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## Step 6: Using It

The unit is charged up with a microUSB plug in the back but works well for a couple hours on battery alone. The tiny switch in back turns it on/off but to start the screen up you have to push the reset button. The view out the window boots up and when you touch it--converts to the white board view. It goes back to window view after 20 seconds of not touching

it. These can of course be changed in the programming.

This unit will afford endless hours of Dilbert style playacting until it's time for her to build one for her kids when they have cubicated.



Love it, and love the story behind it. I need one for my cubicle.

• Never think of you being cubiculized!