



Light em up!



# Problem/Need

The problem I will be solving is, when you need your phone at night it may be hard to find it. This is why I invented Light Em Up! Light Em Up is a phone charging stand that lights up when the phone is plugged in to charge. When you plug in your phone the LED lights turn on for a night light. With Light Em Up you will be able find your phone easier at night.

# Research

---

I research the benefits for having a night light. According to Google “having an night light provides a sense of security”.

According to energy5.com “having a charging stand in a central location is ideal for emergency preparedness”.

According to led.com “led lights are energy efficient, are long lasting, and durable.

# Criteria and Constraints

---

The Light Em Up will provide light at night. It will also be an easy indicator that your phone is charging. You will need a dark room and outlet to test this process. The constraints are that there are many different phone plugs for charging and some people want darkness when they sleep.

# Design Execution

---

It keeps the screen and LED lights upright. Here are the instructions below:

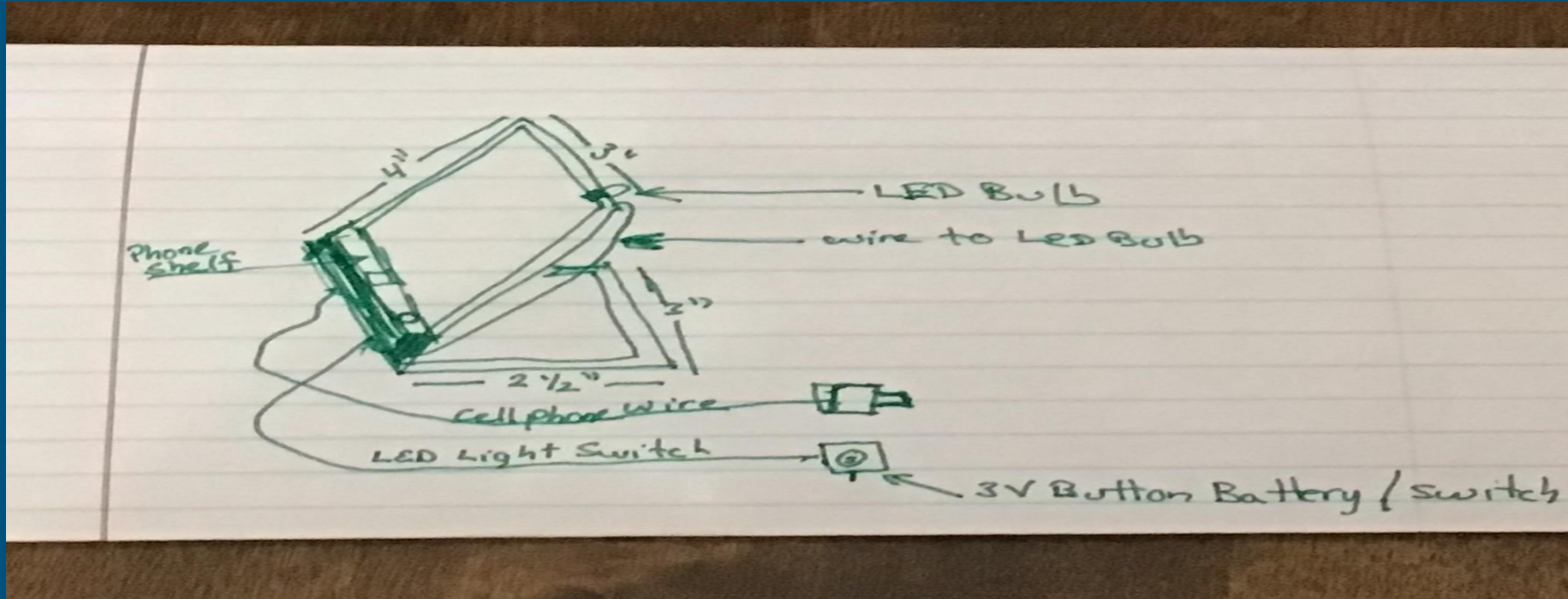
1. Cut wood to size
2. Put stand together using wood screws
3. Drill holes for phone wire and LED lights switch
4. Paint stand
5. Install phone charging wire and LED light
6. Wire 3v button switch to power LED light

# Materials

---

Electrical wire, push button switch, led bulb, wood, wood screws, paint, phone charging plug, 3 volt button battery, on/off switch

# Prototypes



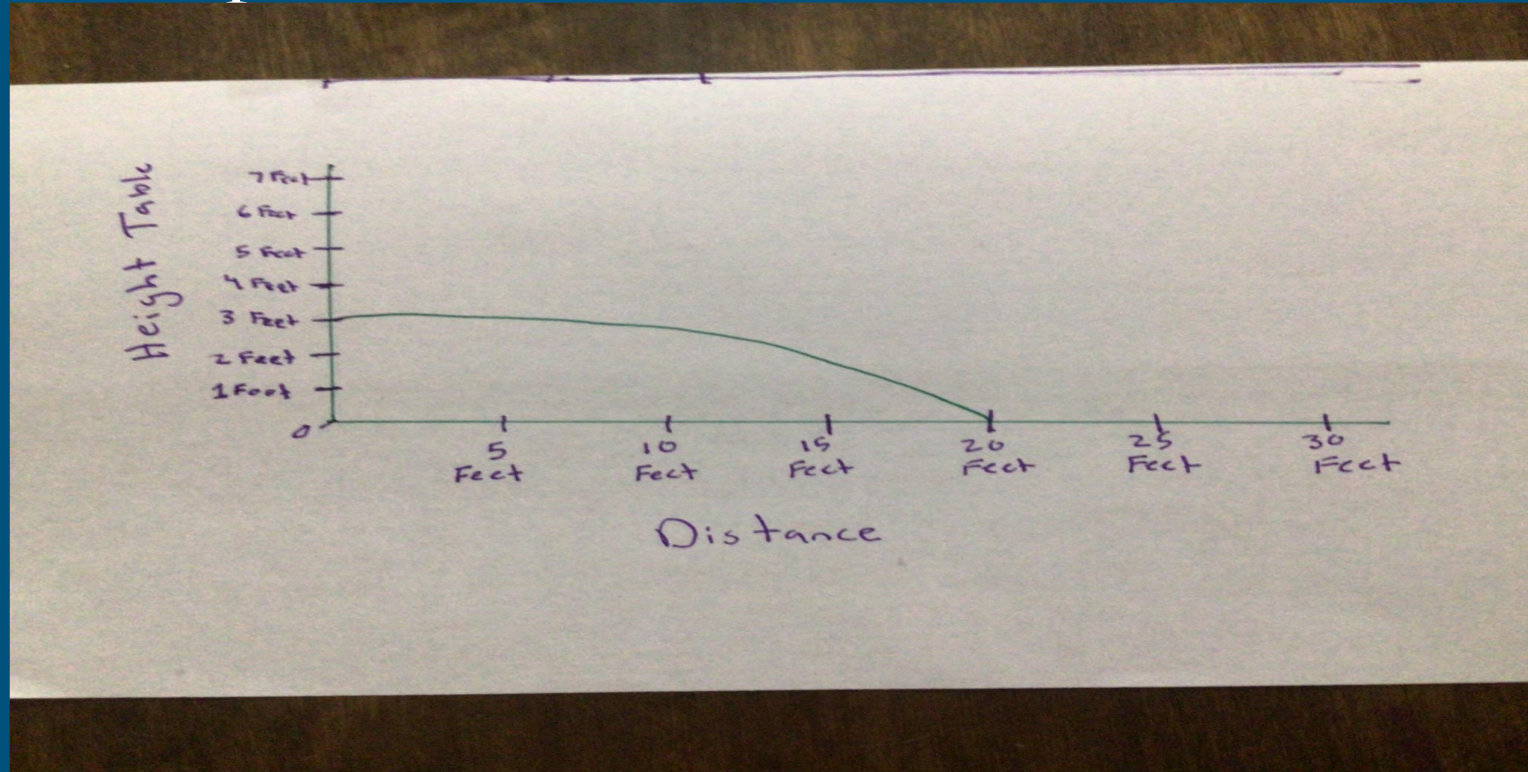
# Hypothesis

If the LED turns on, then the phone is charging and it becomes a night light because, the LED light stays lit.



# Data and Graphs

- 1.Fail
- 2.success
- 3.Fail



# Results

The Light em Up can be seen at a distance of 20 feet. If you put the Light em Up on a 3 foot surface you can see the light from 20 feet away. As you put the Light Em Up on higher surfaces, 1 foot at a time, the distance increases by 5 feet.

# Conclusion

The Light Em Up works! The night light phone charger can be seen from a distance of 20 feet away. The changes I would make next time would be to add sand, paint and bling to the phone stand. Finally, I would have added a better button switch and changed some of the wiring.

# Abstract

The Light Em Up phone charger is a light night charger. When you plug in your phone it will charge it for you. Along with charging your phone, it will be a night light for you so you can have a non-scary sleeping experience. Plus, you will be able to walk around at night, so you will not trip over anything, for your own safety. The Light Em Up phone charger has the distance of 20 feet away. This distance is bigger than most room sizes. You will be able to see all of your pictures and posters on your wall. If I had to build this again I would change a couple of things. The first thing I would change is, I would run the charger wire through the same hole as all the other wires. Second, I would also sand and paint the stand. Third, I would find a new button switch that activates easier. Finally, I would have added many different colors for some added bling! All in all, I really enjoyed this project because, I love my phone and having sleepovers with my friends.