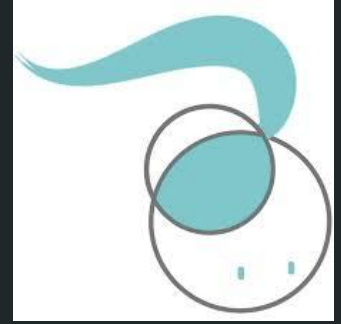


# Welcome to **BOOLEAN GIRL'S**

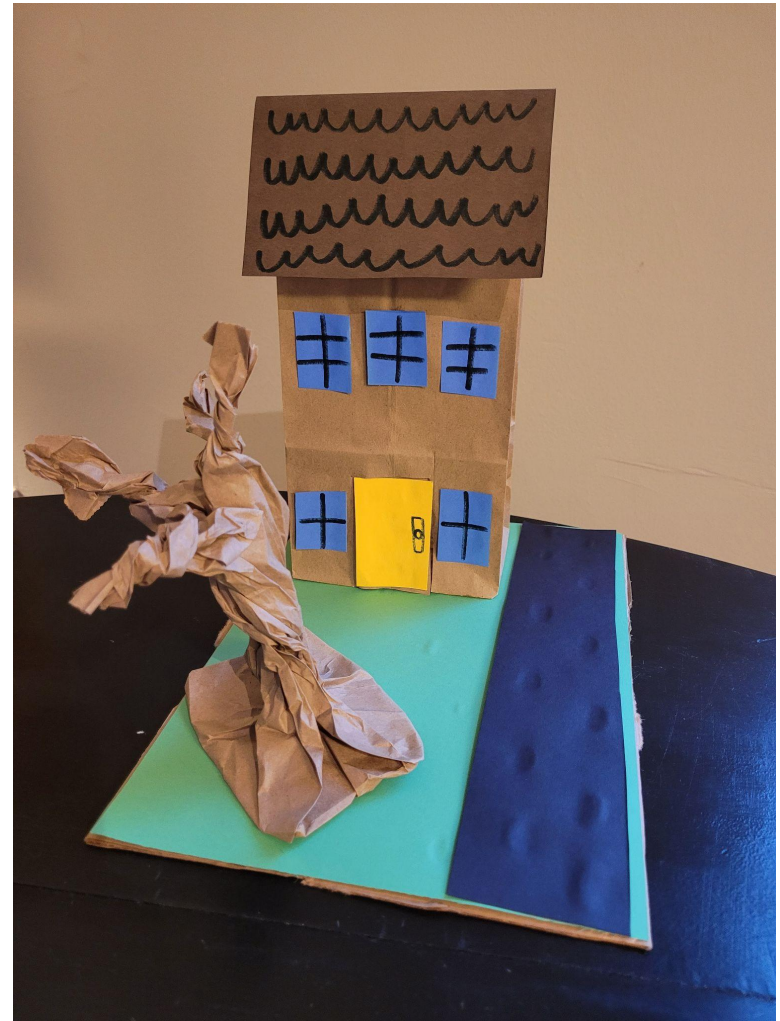


STE(A)M Education with a Focus in  
Computer Science PD

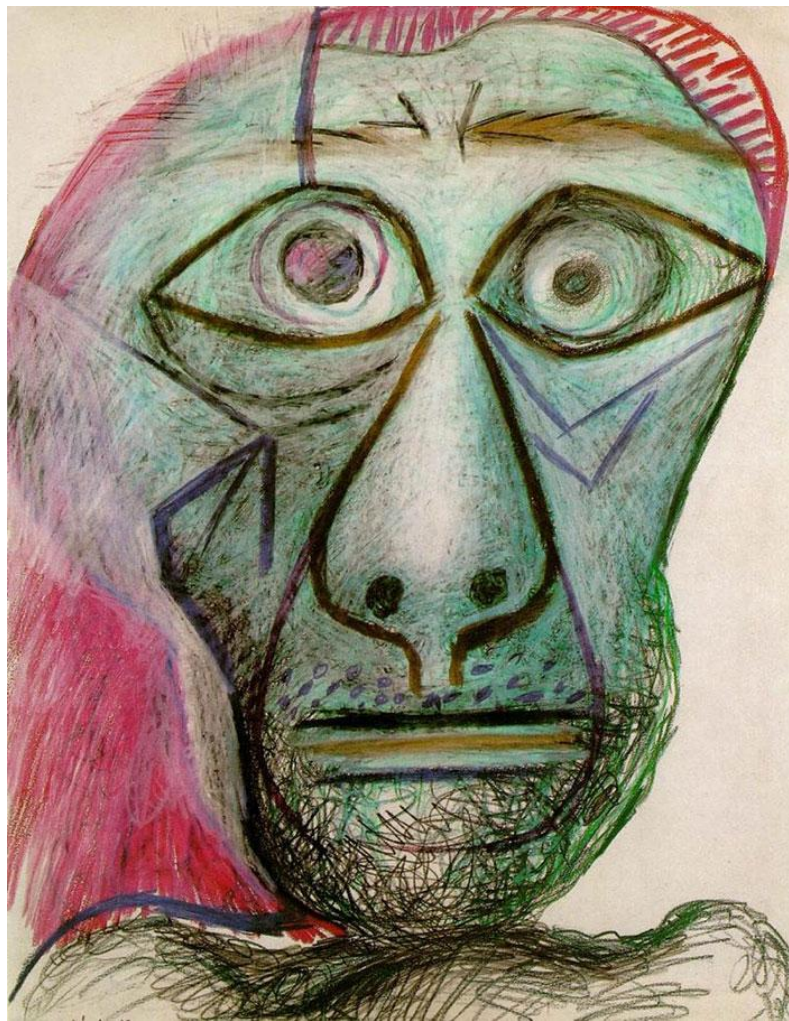
---

Please **click** the link in chat to complete a short **survey**

In chat, **identify**  
the portrait that  
best describes  
your *feelings*  
toward the  
**Enchanted City**  
**Project?**



1



2

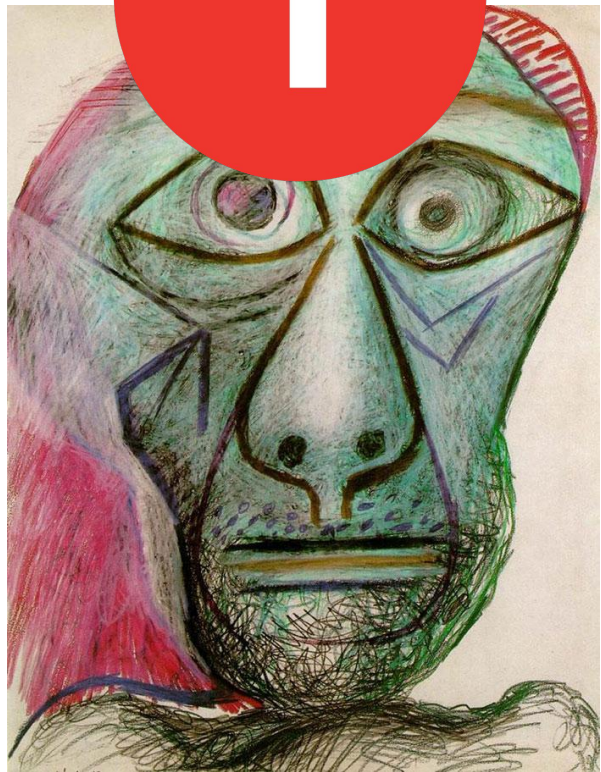




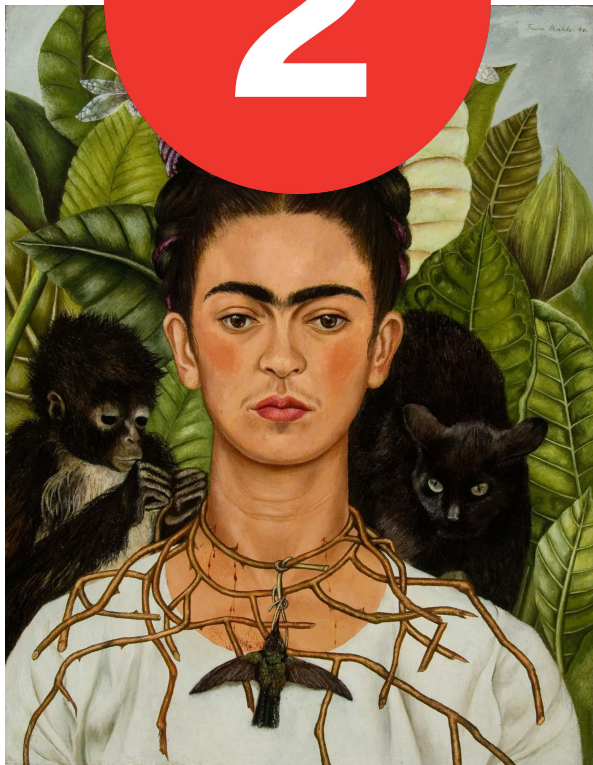
3



1



2



3



As a **STEAM Educator**, Today I Can...

1	<b>Define</b> Boolean Girl's Mission
2	<b>Model</b> STEAM Curriculum
3	<b>Build</b> a Circuit
4	<b>Utilize</b> Boolean Girl Resources
5	<b>Ask</b> Any Questions You Still Have

# BOOLEAN GIRL'S MISSION





Boolean Girl, a nonprofit founded in 2014, educates girls, under-represented groups and low-income kids to code, build, invent and animate.

We are engineers, parents and educators who want to see every opportunity available to every child. We founded Boolean Girl, because the Tech industry has much to offer but it lacks diversity.

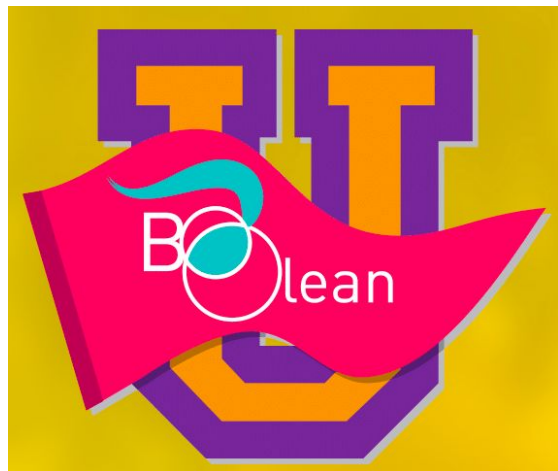
For years we have been teaching girls, under-represented groups and low-income kids how to code and build engineering projects, we are reversing the trend and diversifying the industries of tomorrow.

We are excited for the opportunity to reach more kids by sharing our resources with teachers in DCPS. One of our goals for today is to understand how we can best support you.

More information can be found at <https://booleangirl.org/>.

# Boolean University

Self paced online curriculum that includes written directions, links to example code, video tutorial, and more.



# In Person and Virtual Classes

Pre written lesson plans that can be adjusted to meet the needs of your students.

**Summer Camp**

The Scratch cat character is depicted in a running pose, positioned above an open book with yellow pages and a red cover.

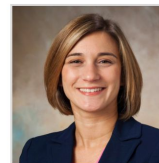
**Animate My Story in Scratch**

Children learn basic coding principles by building a story of their own design. Initially they will follow the instructor as she models her story. The child will then be challenged to modify the story applying coding techniques learned. Children are ...

# Special Events

Online and in person, in which students can meet women working in the industry, earn Girl Scout Badges, visit a Maker Lab, and more.

## SUMMER 2021 AMBASSADOR EVENTS



**Friday, Aug 6th at 1 PM** meet Boolean Girl Ambassador  
Brittany Travis, Senior Project Engineer

Brittany Travis is a senior project engineer for the aircraft components team at Moog. Her team works on several engine/aircraft platforms including the F135 engine project. She enjoys making an impact on the world in particularly the aerospace industry.

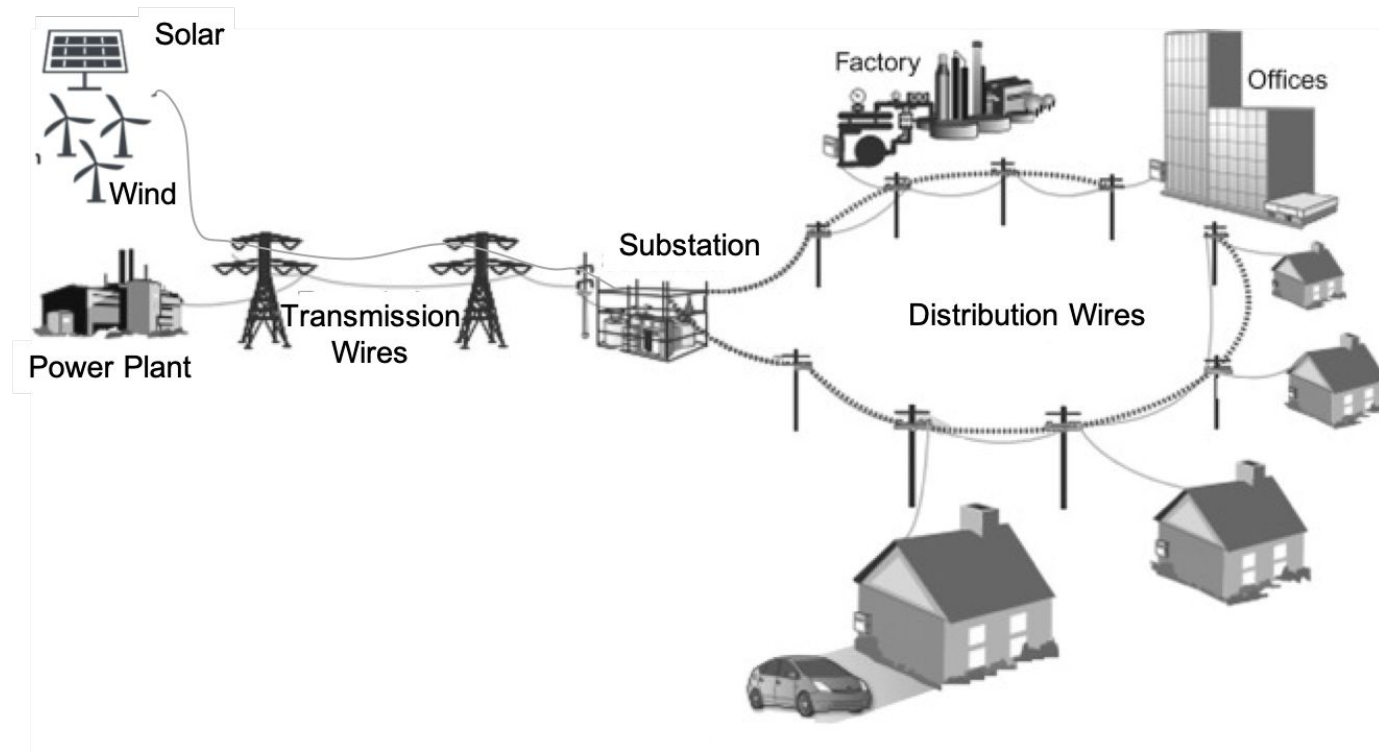
[REGISTER HERE](#)



“Scattered Light” by Jim Campbell

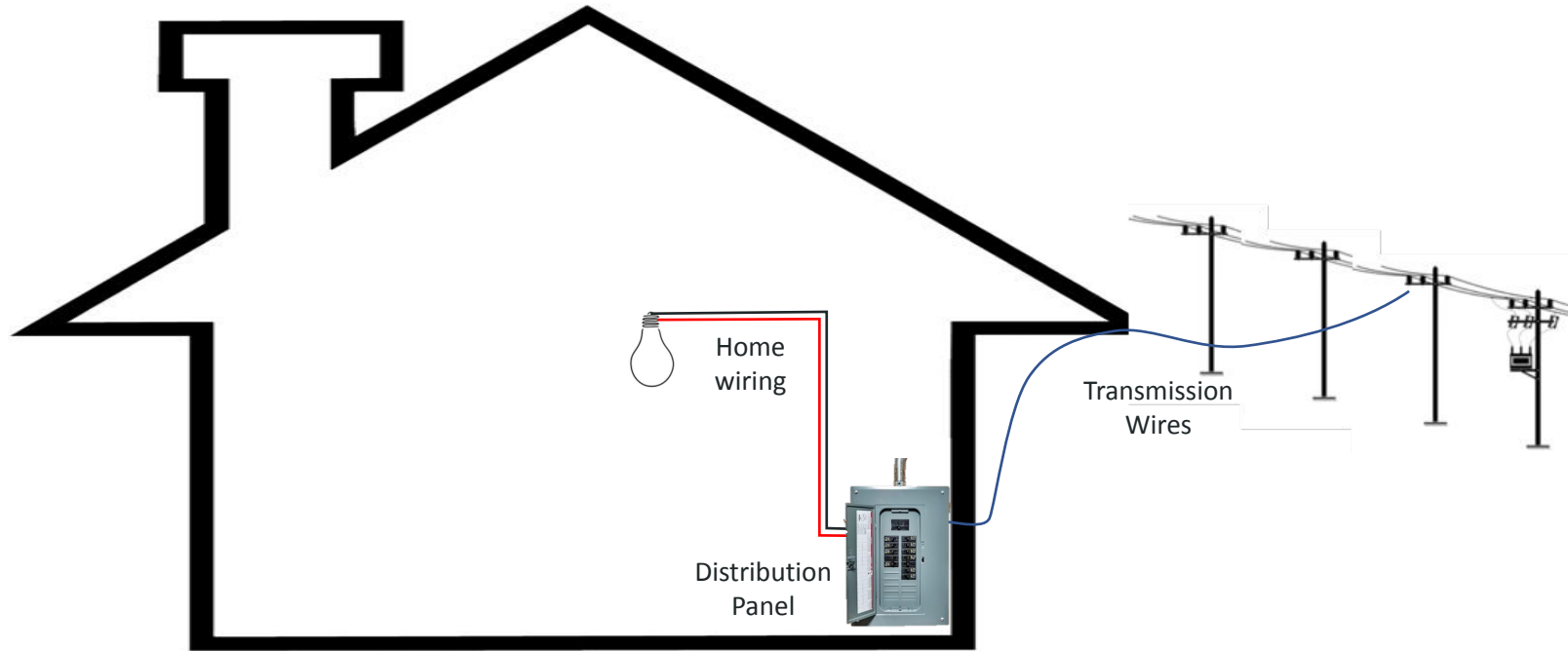




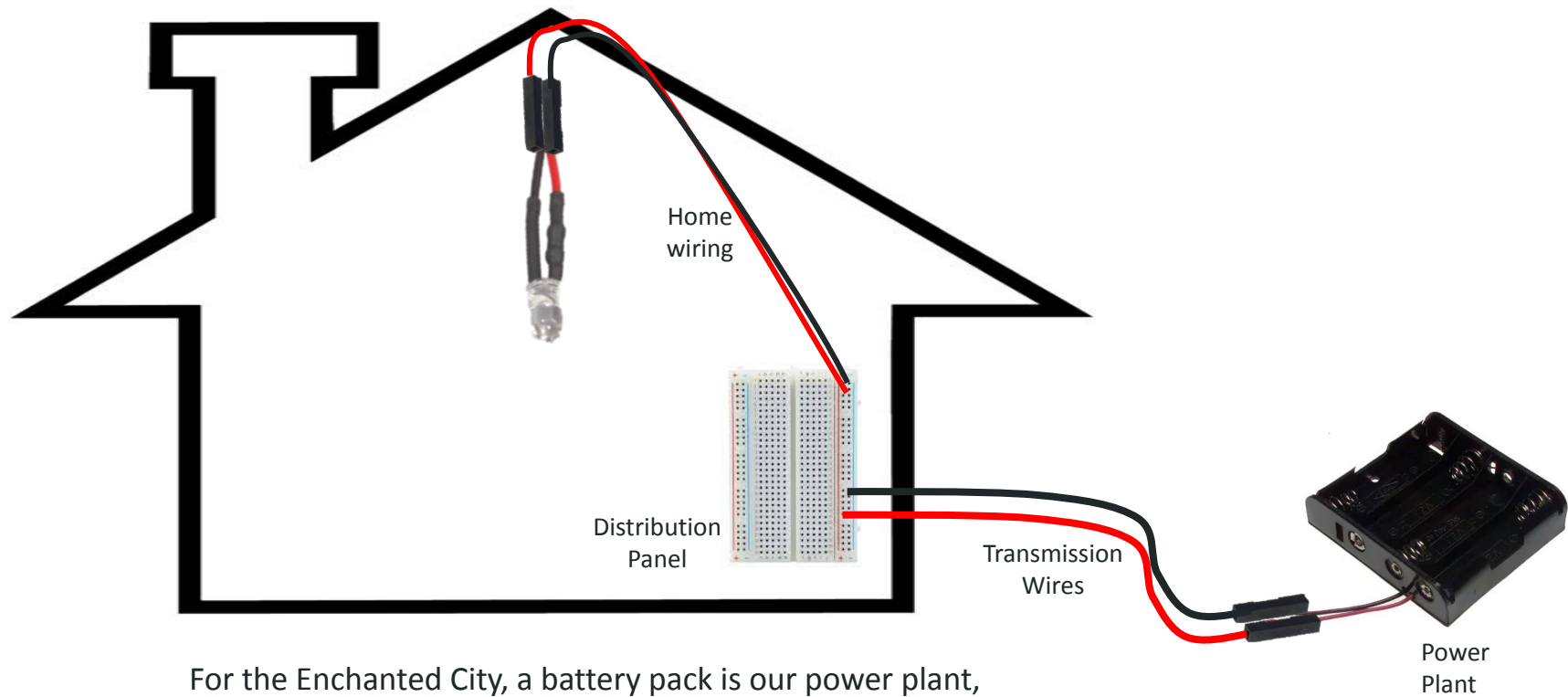


Power is generated from many sources including coal, nuclear, wind, water and solar plants.

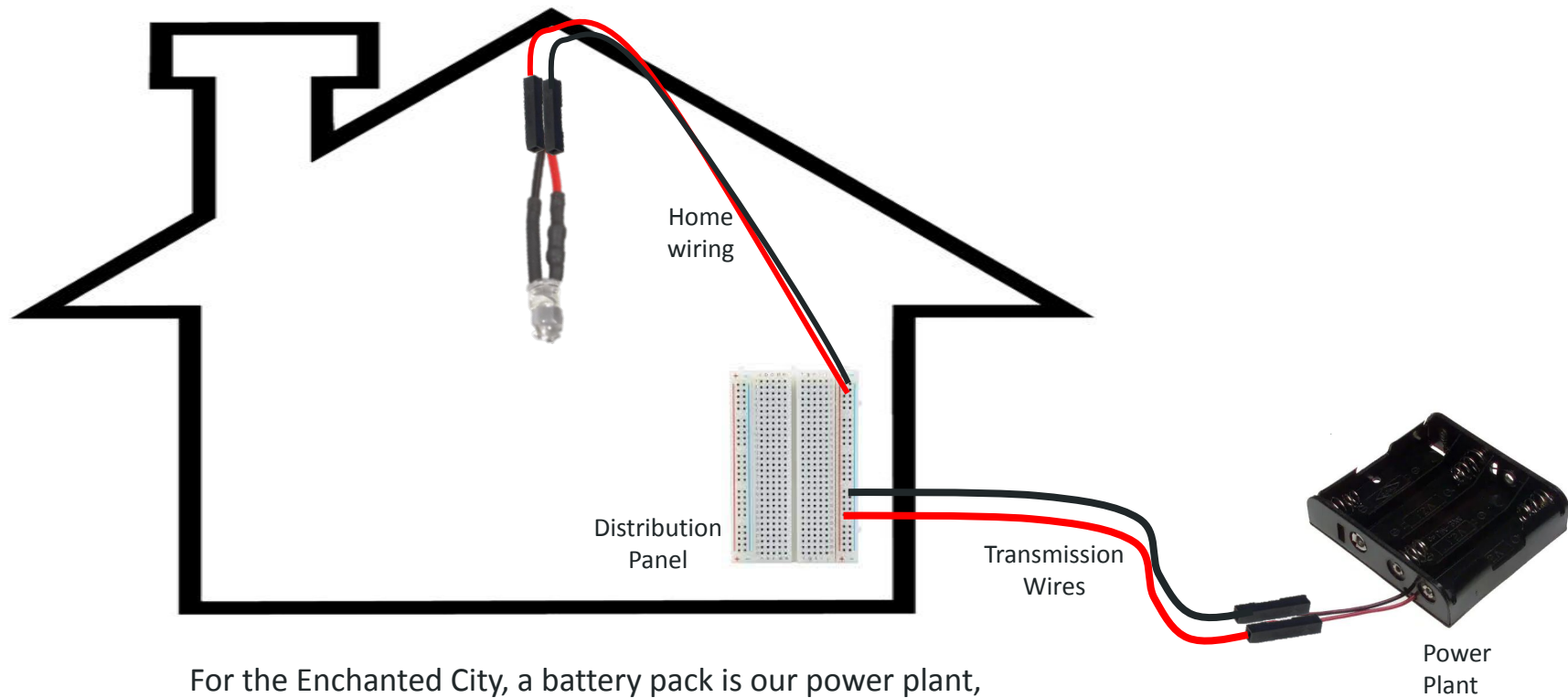
It is delivered to factories, offices, shops and homes through a network of wires and substations.



Power reaches the home through a transmission wire on a telephone pole that is connected to a distribution panel. In the home the distribution panel provides power to lights and outlets. In the home, wires are usually in the walls. We don't see them.



For the Enchanted City, a battery pack is our power plant, wires deliver the electricity to our building's distribution panel, a breadboard. Lights can be connected to breadboard just like they would in a building.



For the Enchanted City, a battery pack is our power plant, wires deliver the electricity to our building's distribution panel, a breadboard. Lights can be connected to breadboard just like they would in a building.



# Things to look for in your neighborhood

Telephone Poles with distribution wires



Why doesn't this street have wires and poles



All the power lines are in the utility strip.

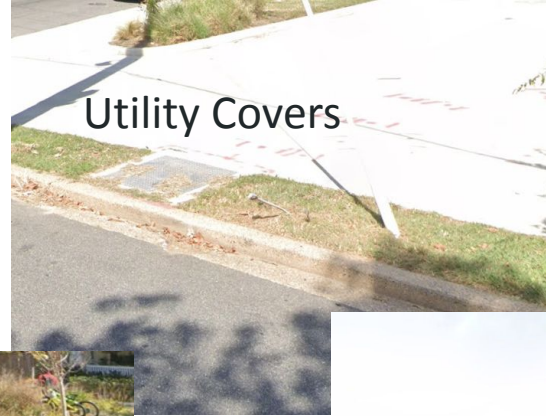


# In the Neighborhood

## The Utility Strip



Junction Boxes



Utility Covers



Utility covers  
– wiring underneath



Street lights

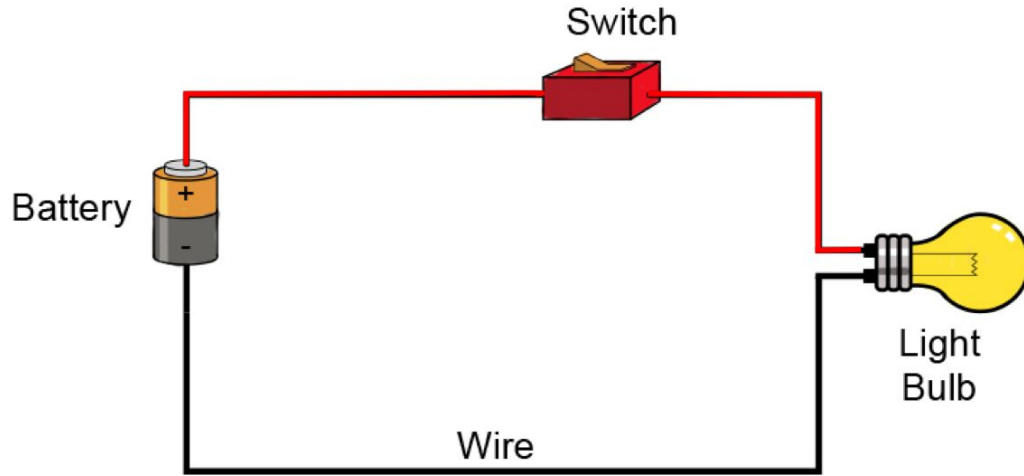


Traffic lights

LETS BUILD



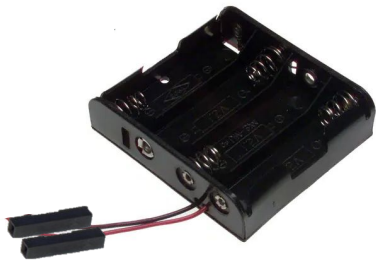
# SIMPLE CIRCUIT



Electricity only flows in circuits. It needs a complete loop in order for something to work.

Building a simple circuit is easy and will bring light to an enchanted city building while reinforcing science standards of learning.

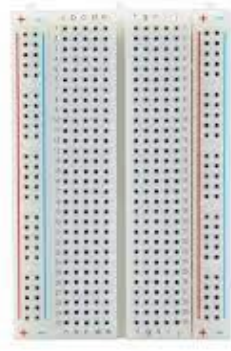
# THE KIT



Power  
Plant



Transmission Wires



Home Distribution Panel



Home Wiring



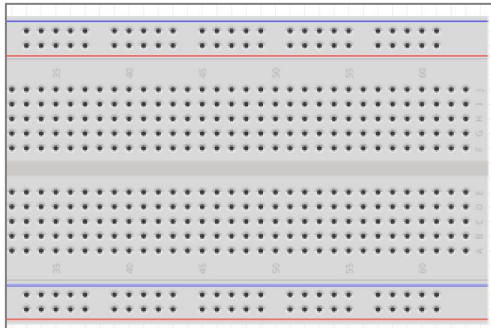
Optional Switch

# BREADBOARDS

A breadboard simplifies connecting electrical components.

Instead of twisting or soldering wires together, you plug the components in the board to connect them.

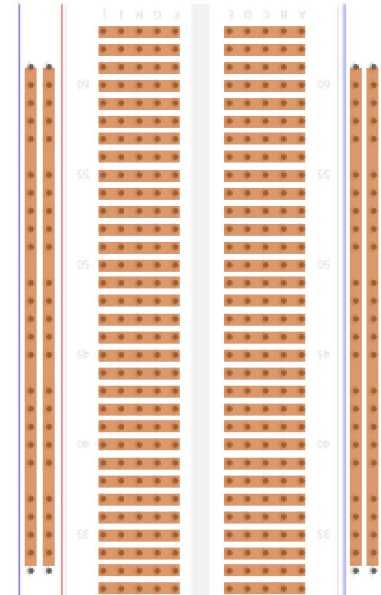
A breadboard is made up of rows and columns with a break in the middle.



If you peel the back off a breadboard, you will see lots of metal strips. These strips connect the rows and end columns on the same side of the break.

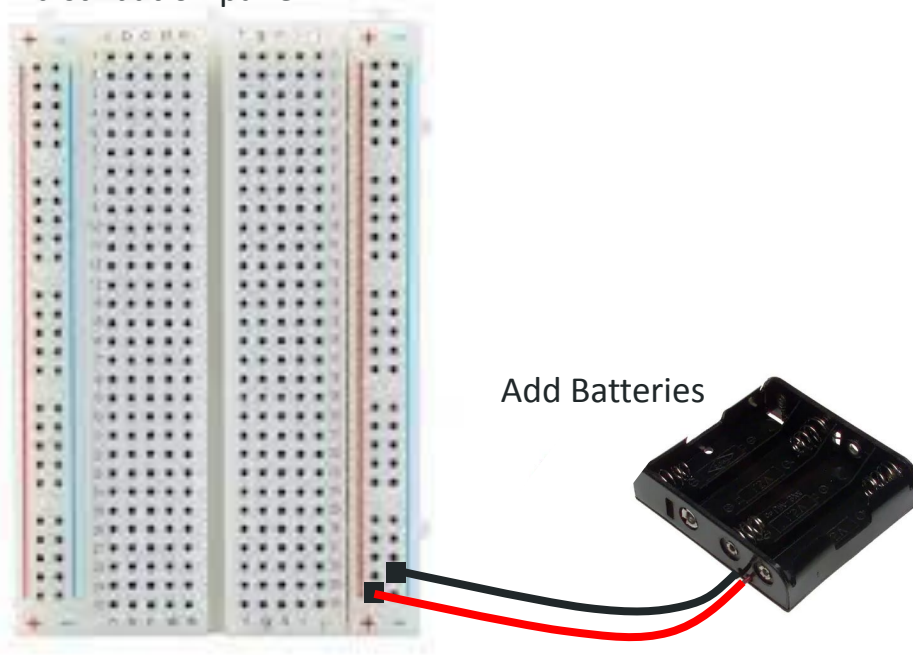


The red lines below represent the breadboard connections on the rows and columns.

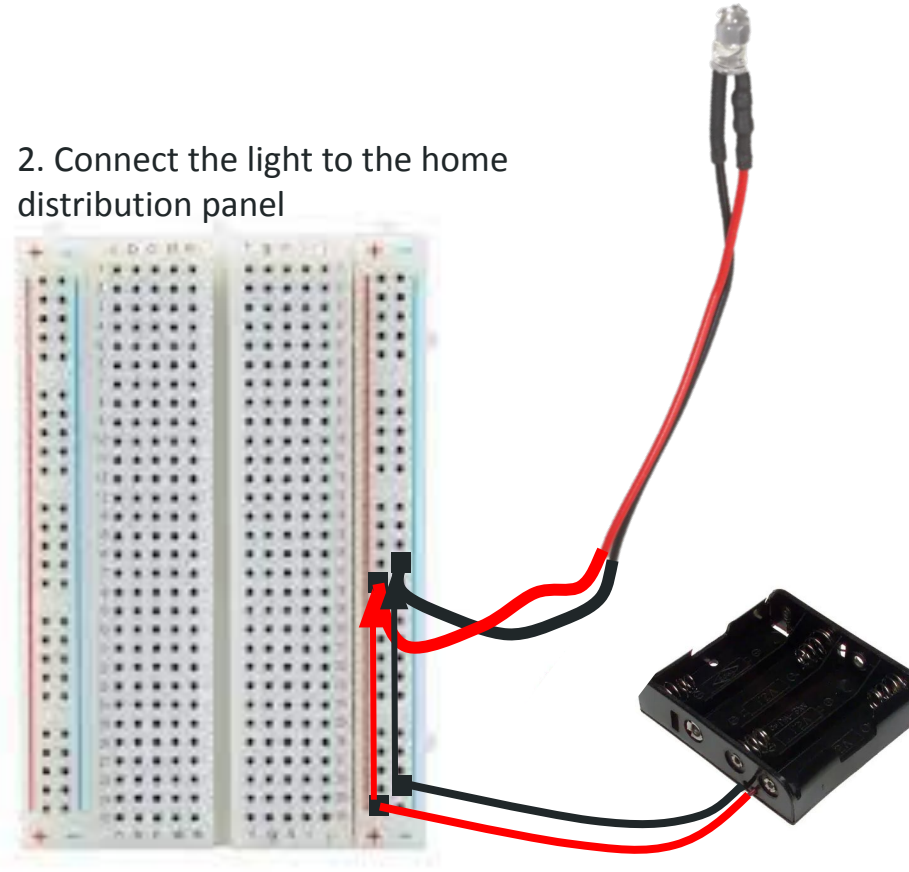


# BUILD A CIRCUIT

1. Connect the power plant to the home distribution panel.



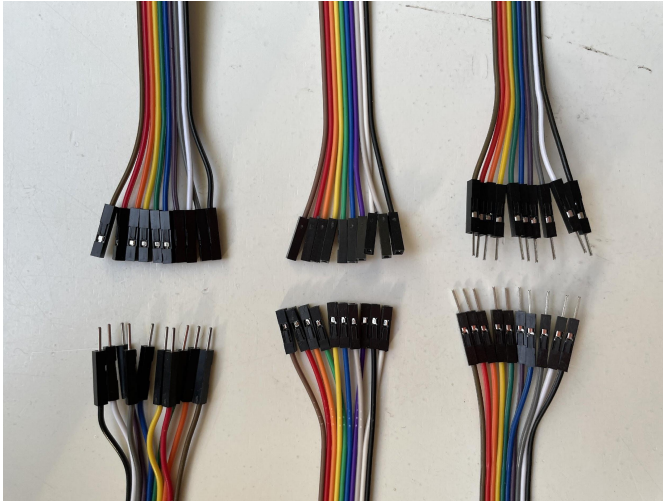
2. Connect the light to the home distribution panel



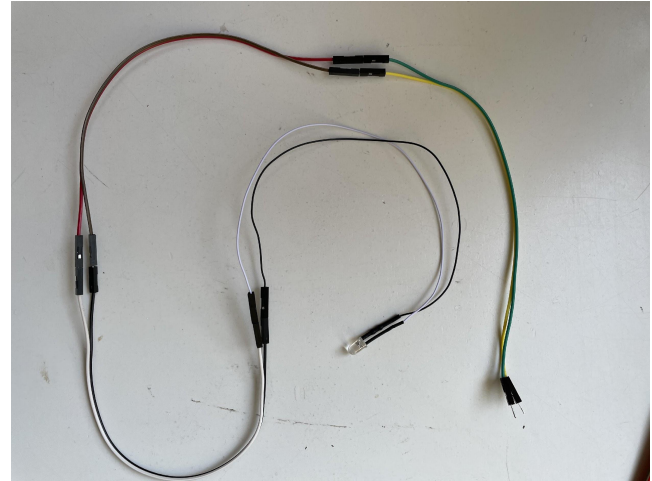


# ADJUST – ADD TRANSMISSION WIRES

Add additional wires to increase distance and reach locations further away.



The kit includes 3 sets of wires with different connectors.



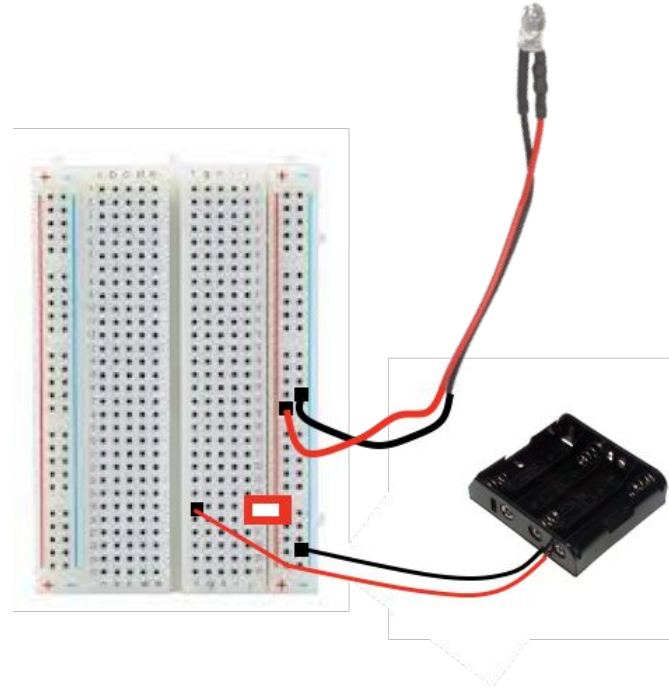
Connect the wires to the lights to make longer wires as needed.

# ADD A SWITCH

Add a switch, or make your own.



The kit includes a switch so you can turn the lights off.



Add the switch into the loop of the circuit.



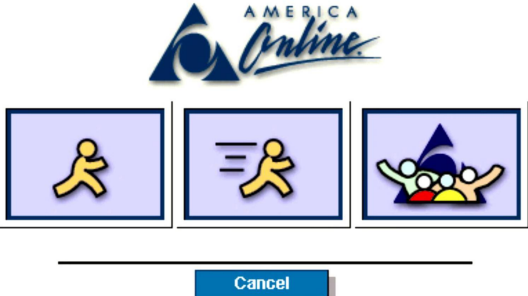
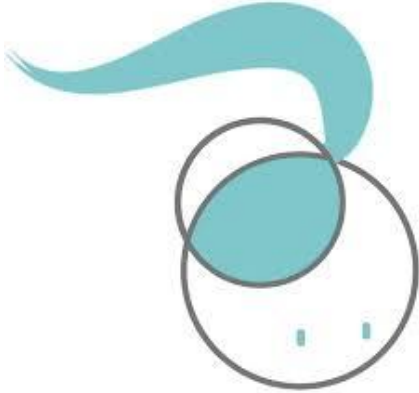

My house with  
lights.

Porch light

A light in the tree

A street light made  
from a straw

# Today's Resources Will Be...

 The image shows the America Online (AOL) login screen. At the top is the AOL logo with the text "AMERICA Online". Below it are three icons in blue boxes: a yellow stick figure running, a yellow stick figure with a list, and a group of people. At the bottom is a blue "Cancel" button.	 A Venn diagram consisting of two overlapping circles. The intersection of the two circles is shaded in a light blue color. A teal wavy line extends from the top left of the intersection.	 A large, dense crowd of small, stylized human figures in various colors (red, blue, yellow, green, etc.) standing on a light gray background.
<p>Email to You</p>	<p>Posted on Our Website</p>	<p>Explored Further in a Learning Cohort</p>

# SMART HOME

A simple smart home where the lights come on at night

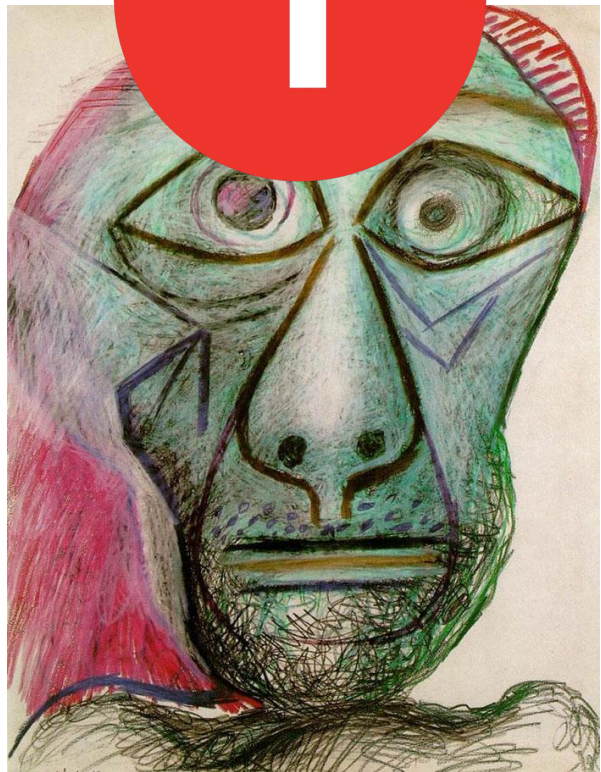


# Seriously, Join Our Cohort!

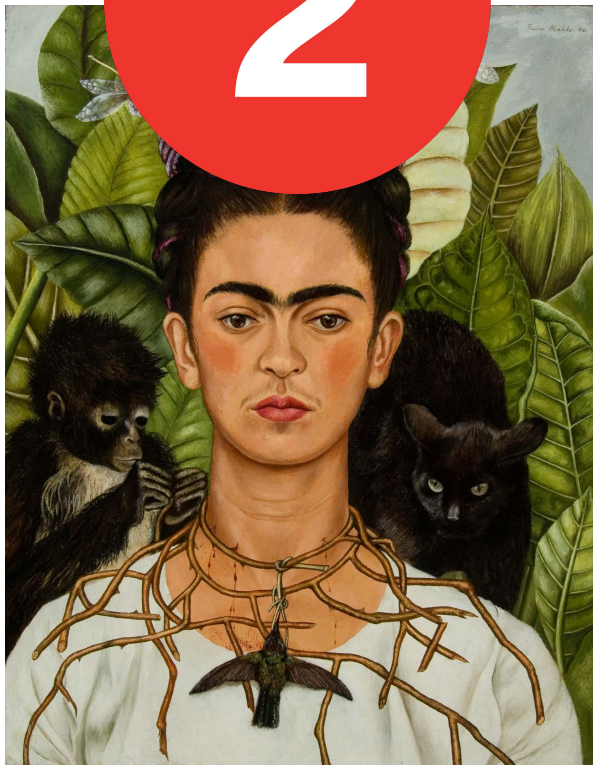
**Sign up for Boolean Girl's Collaborative Coding Sessions which will meet 4 times throughout the school year.** Through this program you will learn to code, develop curriculum, share ideas, and celebrate the success of your students! Information will be sent to via email.

What **questions** do  
you still **have**?

1



2



3

