Benjamin really liked the light pillow and the ocean wall hanging.

~~Jun~~ August 11, 2017: Simple Circuits for Yorktown

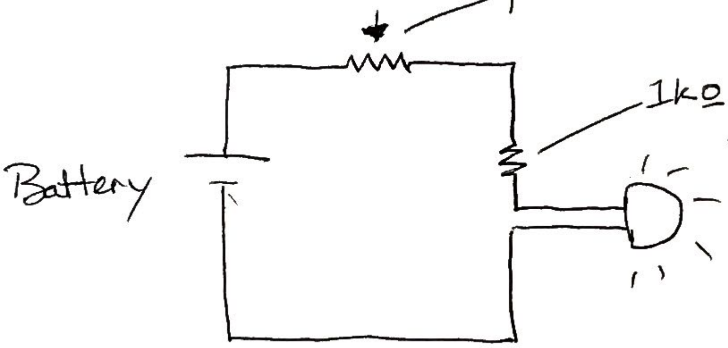
Jon says to try replacing LED w/ buzzer as 2nd steps.

Resistors = ~~Increases or~~ decreases amount of current.

LED and photo resistor:

= variable resistor

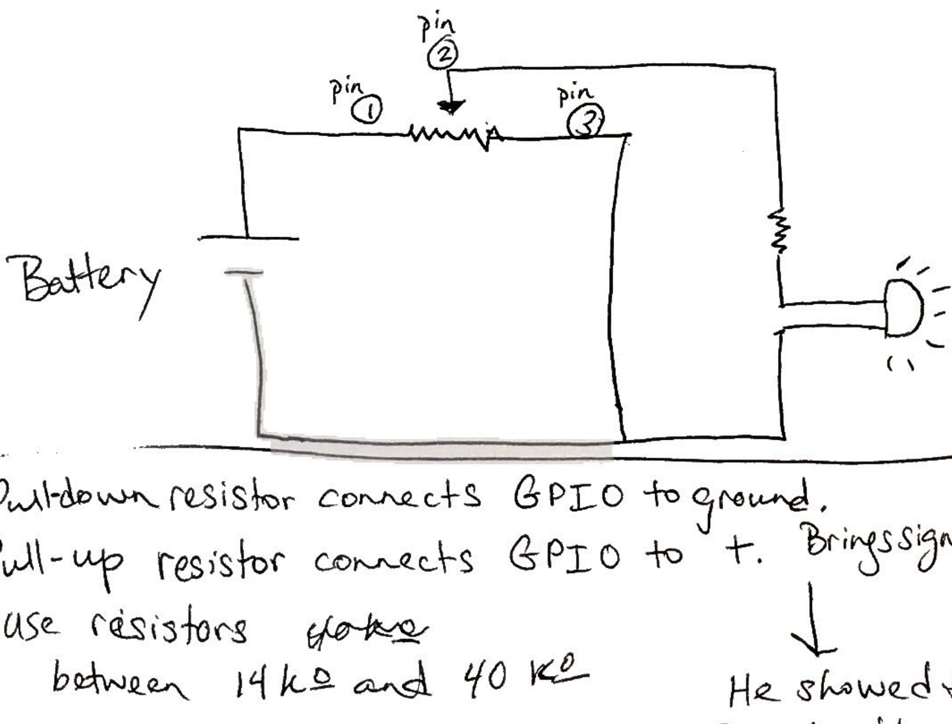
" " = see tutorial "A Simple Resistor Circuit" on Txplore, He shows how to measure current w/multimeter.



= fixed resistor

These resistors are connected in series

LED and potentiometer:



1 goes to +
2 goes to LED
3 goes to ground or negative

Current of circuit never changes. Pot just creates a ~~current~~ Voltage divider varying the amount of ~~current~~ voltage on either side of the divider. Kirchoff's law. Voltage ladder is more than 1 divider

Pull-down resistor connects GPIO to ground.
Pull-up resistor connects GPIO to +. Brings signal down ↑ up ↓
use resistors ~~abo~~ between 14kΩ and 40kΩ

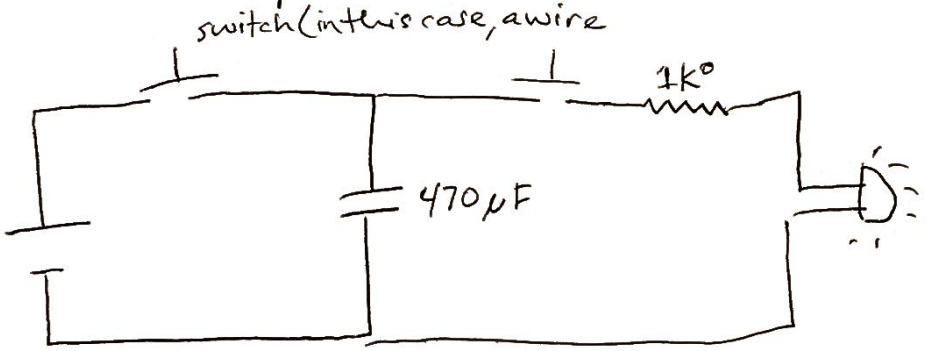
He showed the signal with an oscilloscope. The line was straight with pull-up/down resistors.

Eliot played with the jellyfish once I pointed it out to him. I don't remember what he said. :(Catalina also played with it a bit, too even after Eliot walked away. I'll record Stella's voice in it on Thursday and see if Jon can program it in for Saturday's class.

August 28, 2017 : Txplore

Capacitors:

• Capacitors can store energy. In this example, you charge the capacitor then use it to light an LED until the energy stored is used up.



Charge cap. = jumper wire in negative rail. Then plug the jumper wire into resistor attached to LED

Refer to video 2 of capacitor sequence

• Using capacitors to clean up noisy signals. Uses an oscilliscope. Capacitor here removes the A/C component of the signal (∿∿∿) and leaves the DC (——). Maybe just show this video to the class since he uses a signal generator machine. Start about 7:30 into the third video.

What do the capacitors do in our oscillator circuit?