# White LED Brick Testing

1. A variable power supply was set to 3.3v and hooked up to each LED to test functionality.
2. Each led drew ~ 0.02-0.03 amps of current and would light up brightly.

# Teal Sensor Brick Testing

1. Use a power supply to apply +3.3v to the 3.3v white wire and connect the ground of the power supply to the blue ground wire.
2. Use a multimeter connected to power supply ground, and the other lead connected to the signal wire (yellow) of the sensor. Measure the resistance in light and out of light.
3. Make sure the voltage from signal pin is high in the light and low in the dark. It’s not the end of the world if it is backwards - you can just reverse the +3.3v and GND wires.
   1. For my environment, in the dim light from a couple overhead lights in my basement, the resting voltage is around 2v to 2.3v.

# Neopixel Brick Testing

1. An additional RPi Pico was set up running the normal script. Temporary alligator clips connected the +5v, GND, and DIN pin of the neopixel strip to the corresponding pins in the microcontroller (shown in wiring guide spreadsheet)
2. Plug in the usb to a power supply or computer, run the script
3. You should see the rainbow animation occur, indicating that the microcontroller is starting up.
4. If so, neopixel brick is working.

# Fan Testing

1. Set power supply to 5v
2. Connect exposed wires of fan to 5v and gnd
3. If fan works, it should be blowing air.

# RPi Pico Board Testing

1. After soldering the neopixel brick onto the pico, plug in the pico to power to ensure that the neopixel strip lights up accordingly. It is safe to use neopixel strips in testing the Pico because they were confirmed to work in the neoopixel brick testing section.
2. If the neopixel strip works, proceed and solder the rest of the board up.

# RPi Pico Board Testing After Completion

1. Construct a demo lego enclosure that can easily be used to plug in each lego sensor
2. For each wire harness, plug in each sensor, fan and led and ensure that the water sensor works.

# Mist generator testing

1. After full construction of mist generator, plug in to a wall to ensure that the mist generator works.