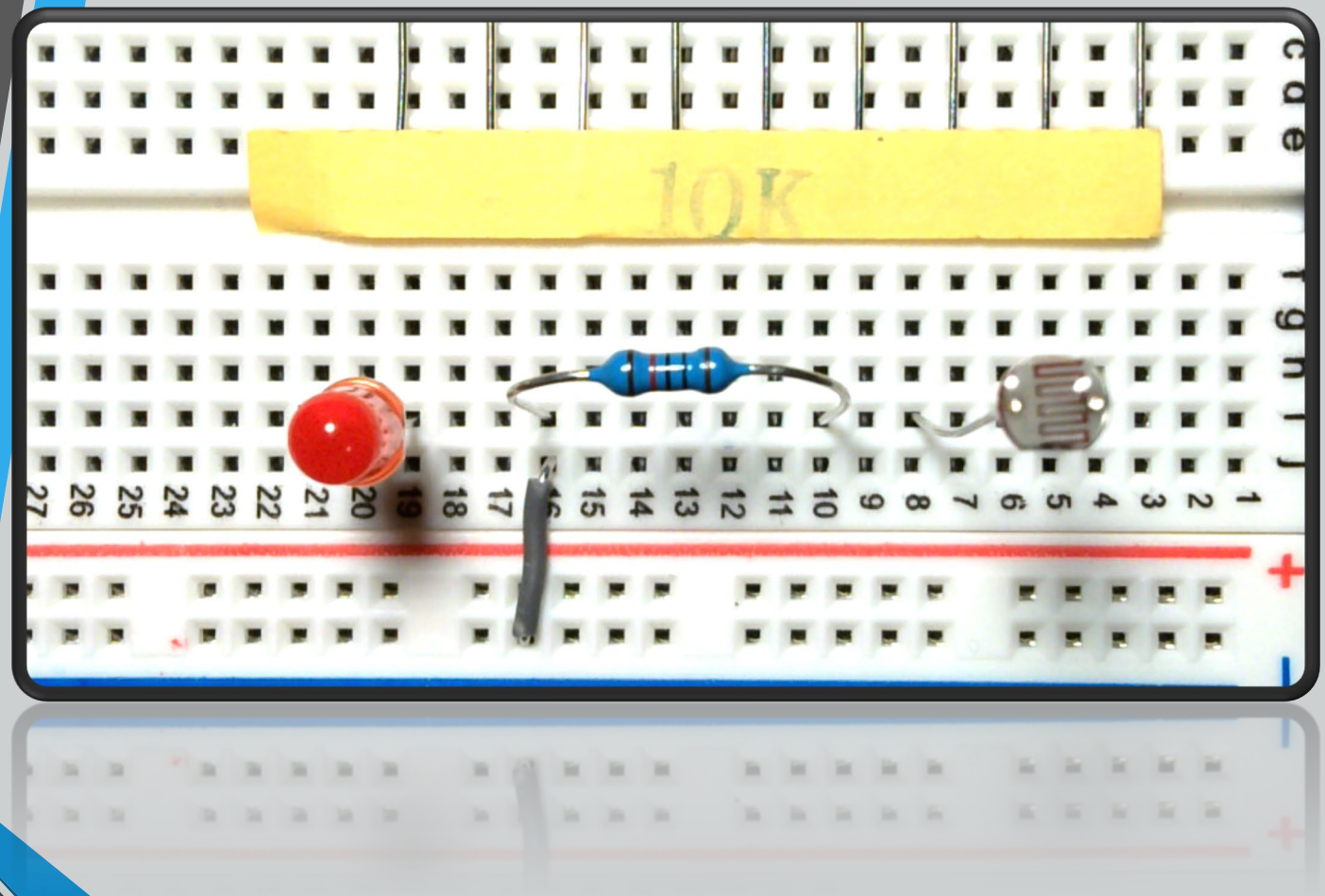
The Night Light Challenge

Aaron M. Perez

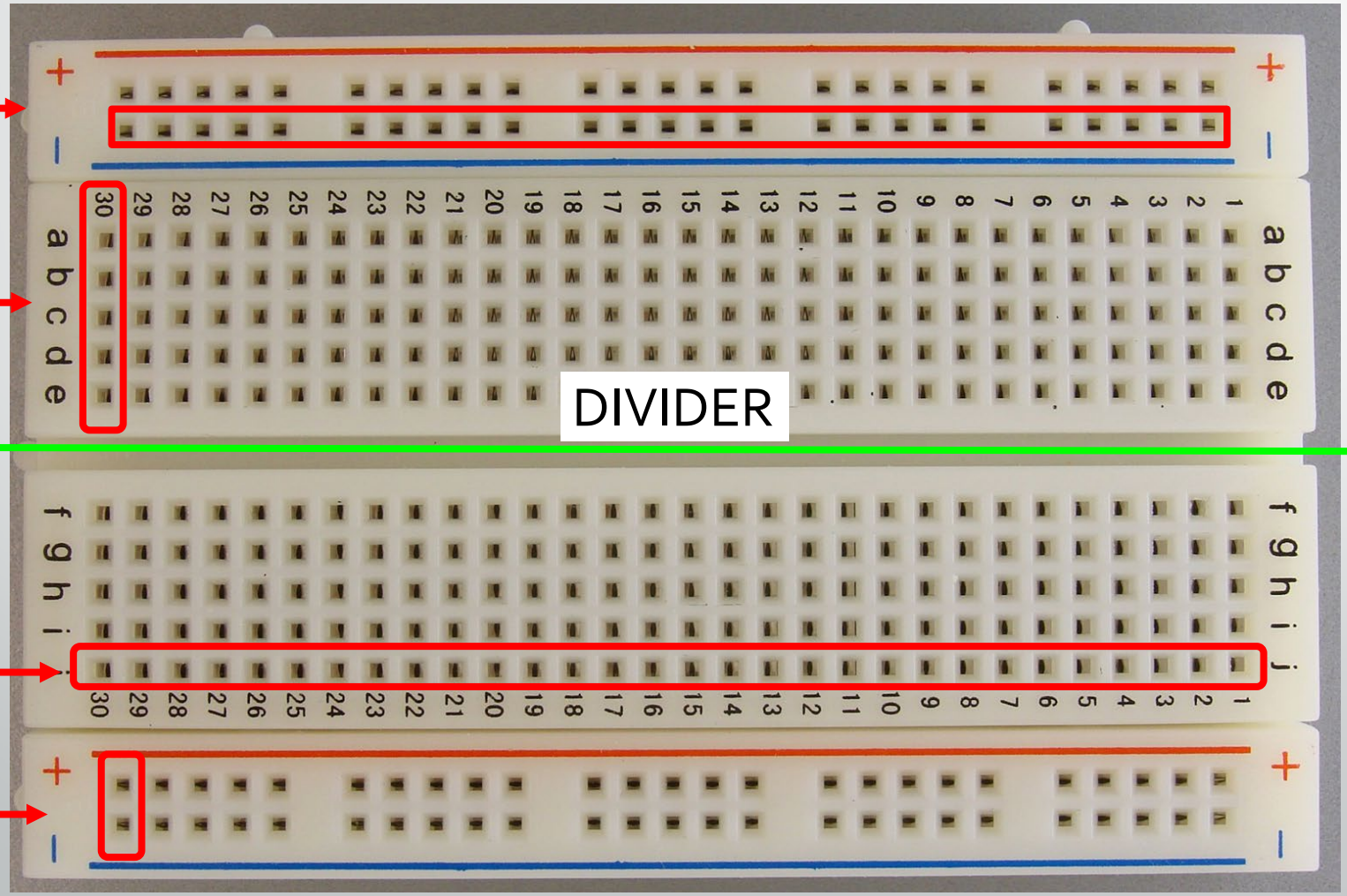
Dr. P Learning - 2025

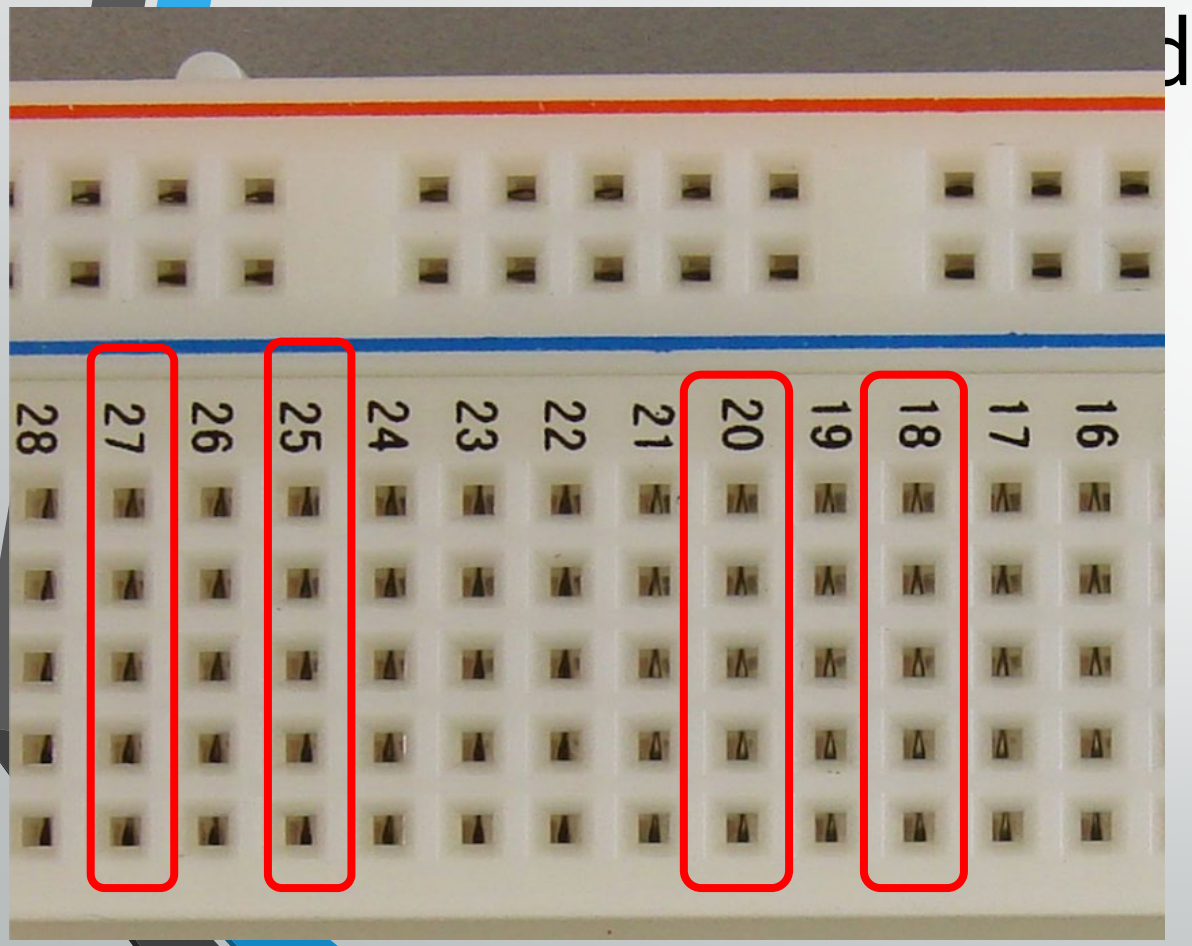


In this Lesson…

- Students will learn to setup an electrical schematic of a night light using a
  - An LED (Your color choice)
  - A 10 kOhm Resistor (Blue)
  - Photoresistor (light dependent resistor)
  - A pin jumper (gray)
  - Several jumper wires
    - 2 Red
    - 1 Black
    - 1 green

Breadboard

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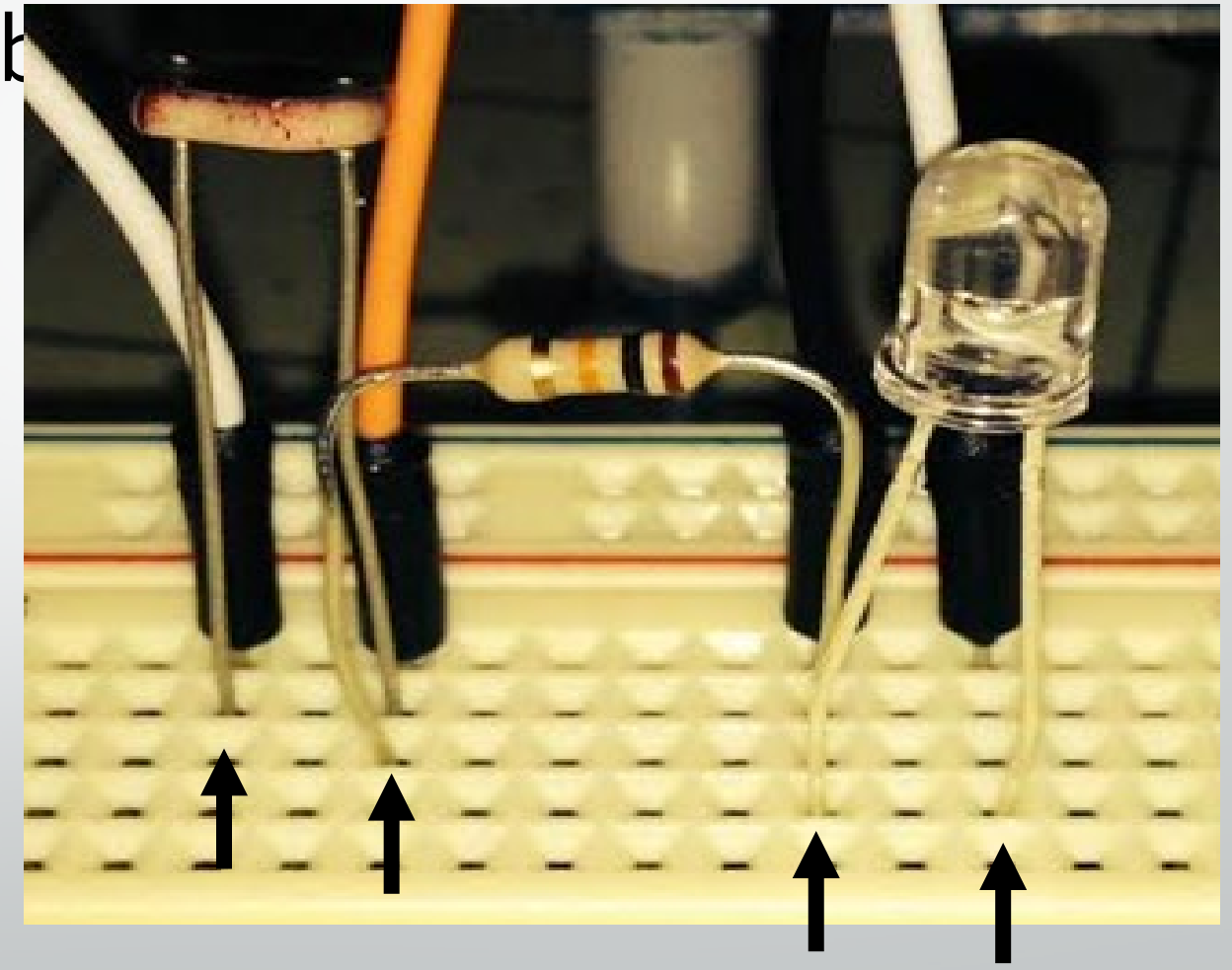
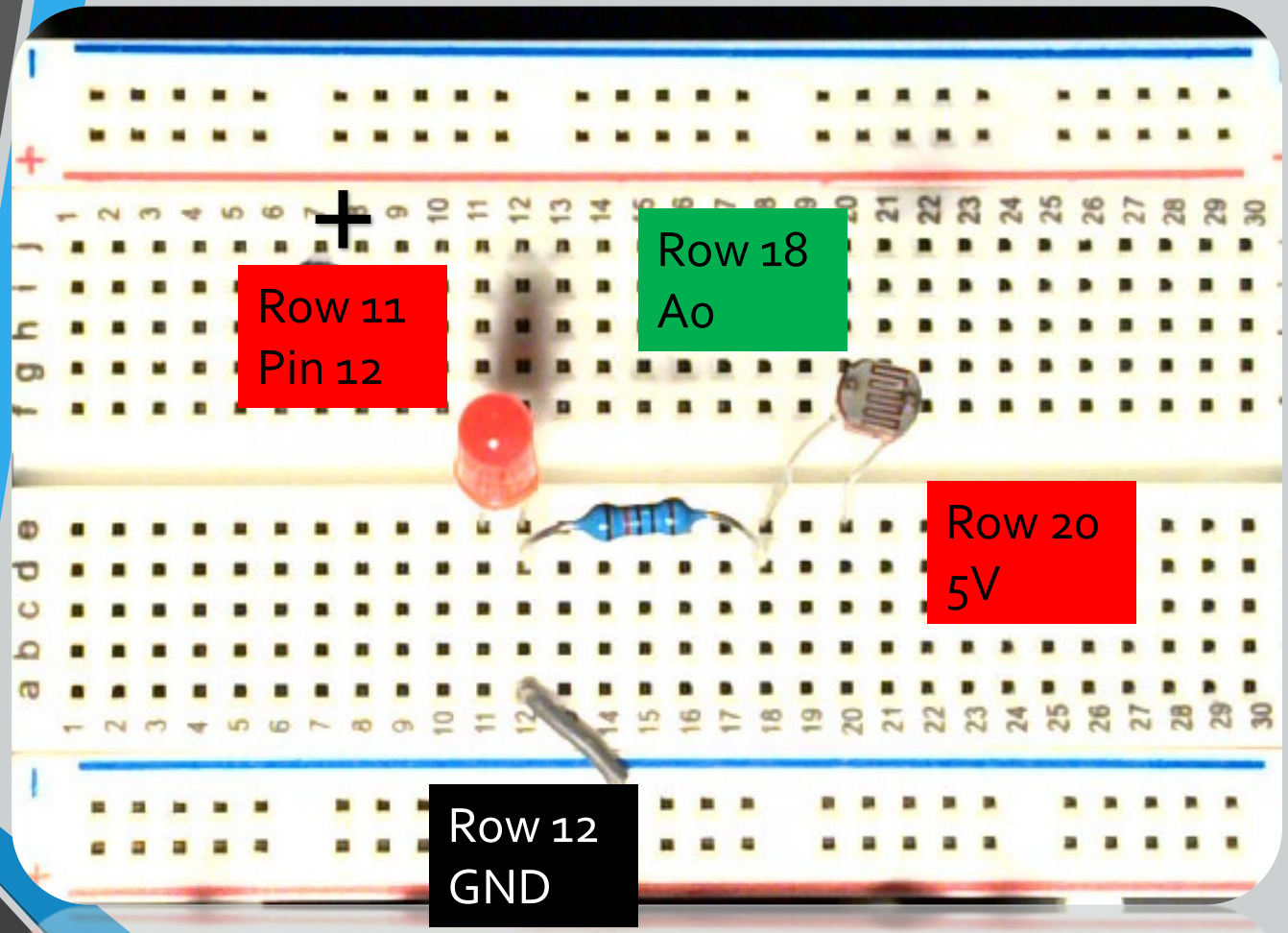




Pause the video here to make sure that you have this setup correctly

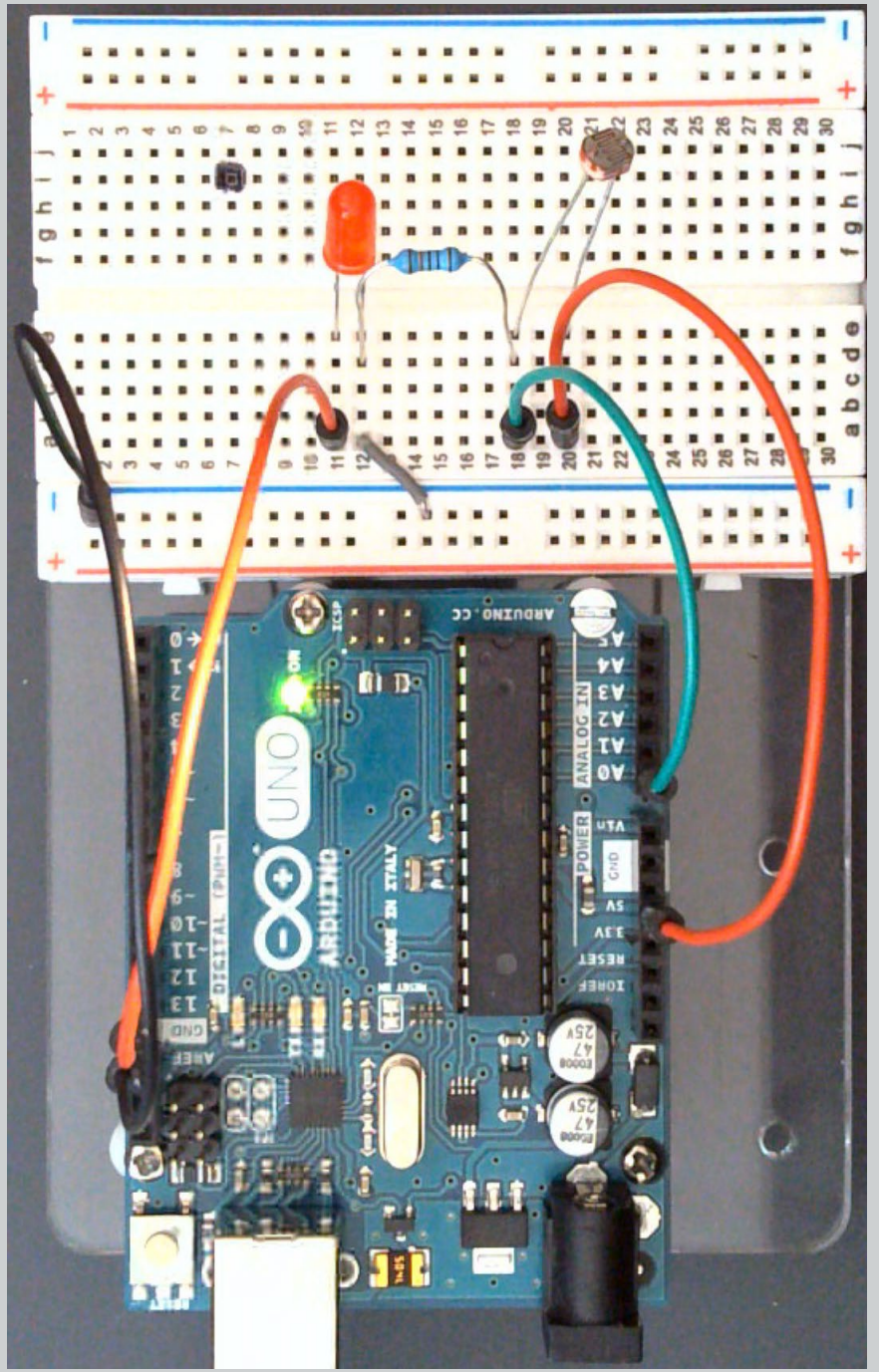
- LED
  - Long Stem connected to

    Pin 12 Power (**Row 11**)
  - Short stem connected to GND with 10 kOhm Resistor

    (**Row 12**)
- 10 kOhm Resistor
  - Connected to GND with short stem of LED (**Row 12**)
  - Connected to AO with Photoresistor (**Row 18**)
- Photoresistor
  - Connected to AO with 10 kOhm Resistor (**Row 18**)
  - Connected to 5V Power

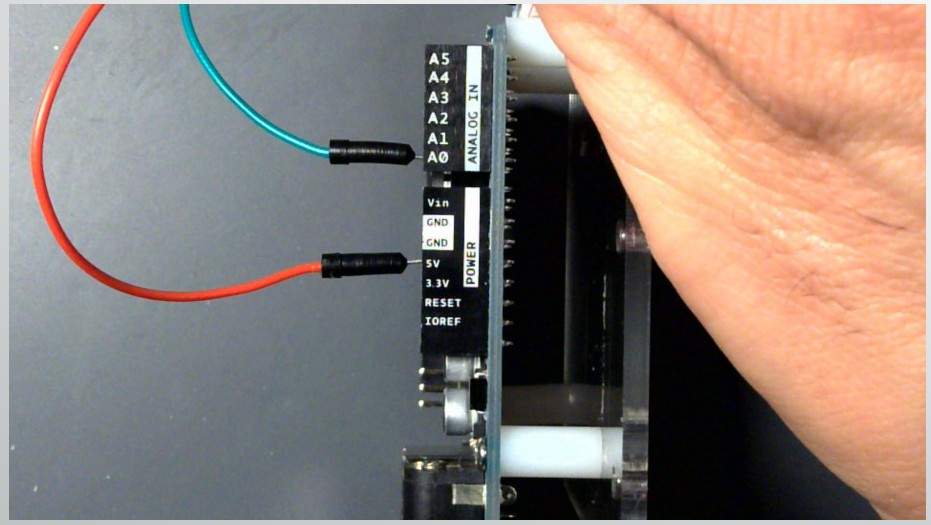
    (**Row 20**)

- First Red Wire to Pin 12 on Arduino and (+) column on Breadboard
- **Black Wire** to GND on Arduino and to (-) column on Breadboard
- Green Wire to **Ao** on Arduino and Row 18 on Breadboard
- Second Red Wire to 5V on Arduino and Row 20 on Breadboard

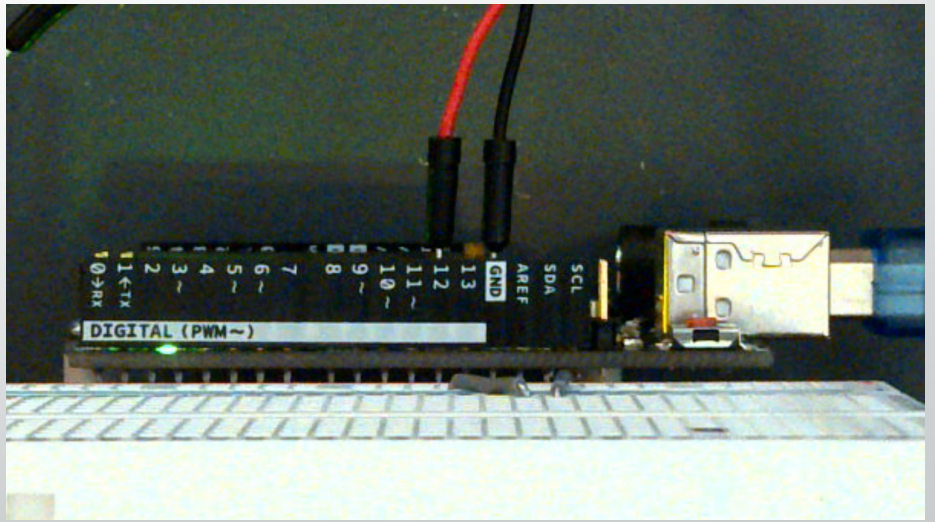


Connecting the Jumpers to the Arduino

5V & **A0** (Analog 0)

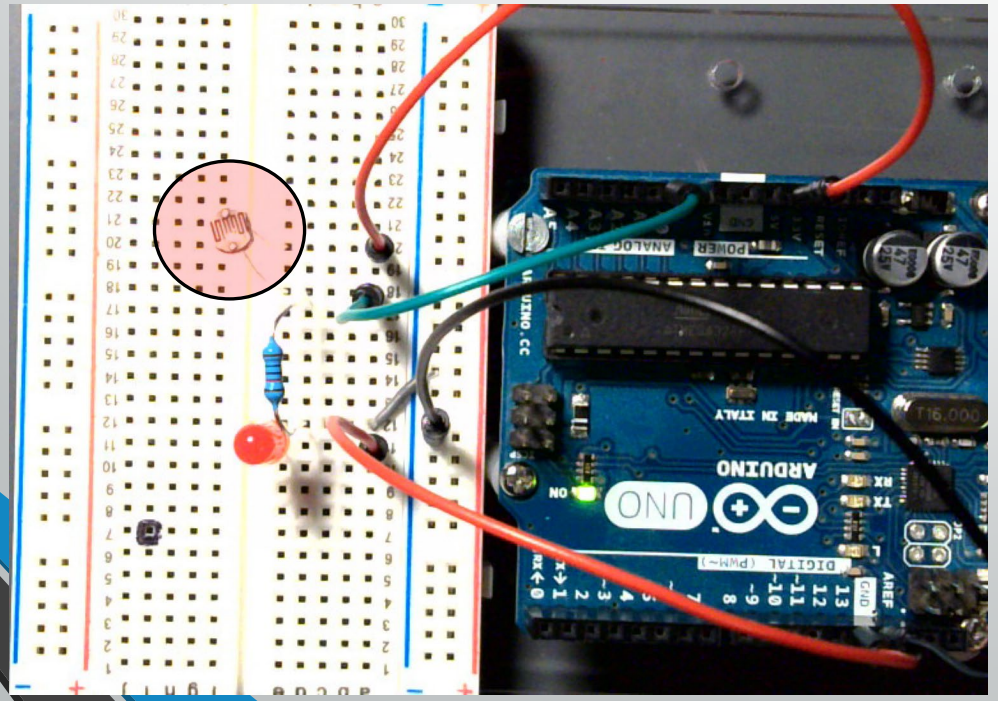


Pin 12 & **GND** (Ground)



Not Covering the LDR & Covering the LDR

Not covered LDR



Covered