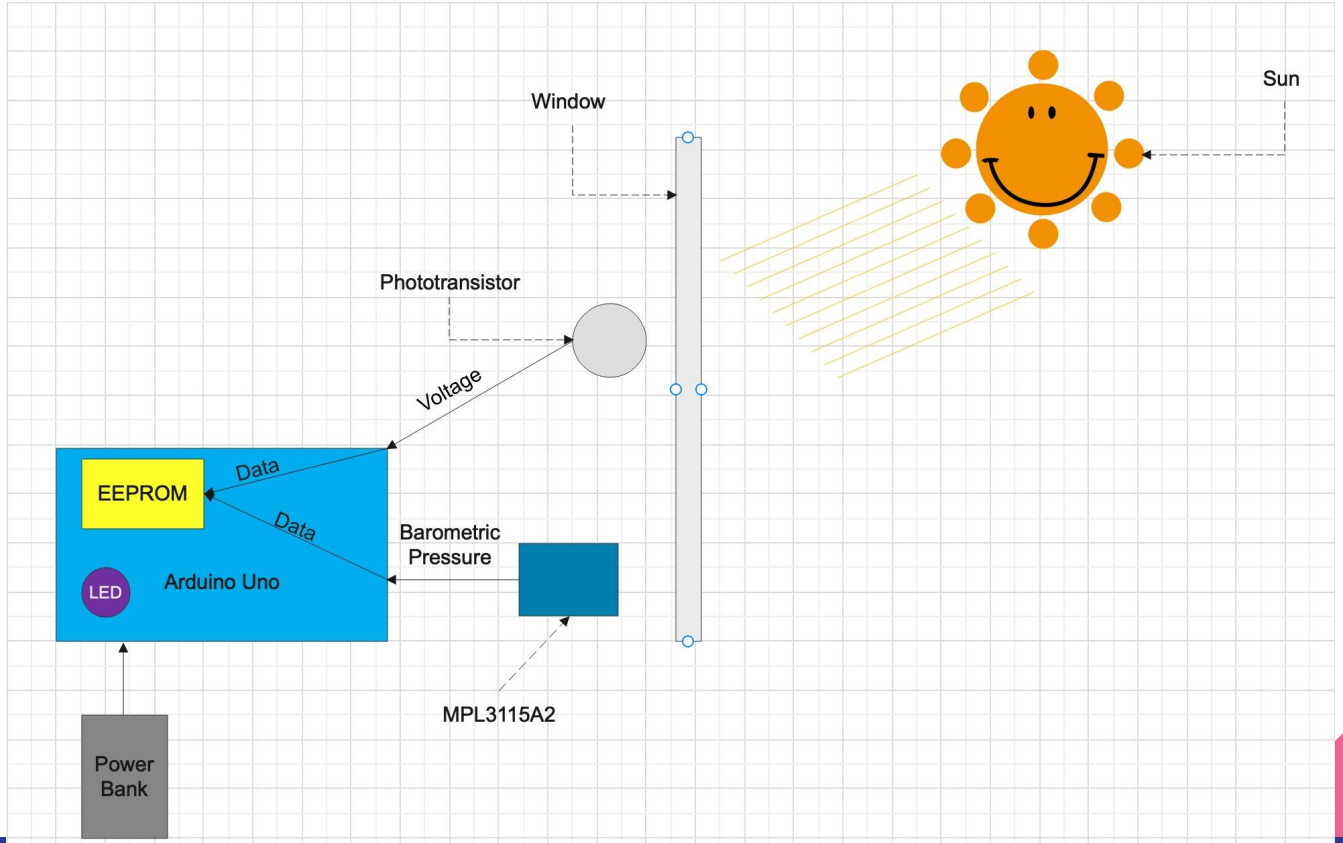
Does the Barometric Pressure Correlate With the Amount of Sunlight in My Room?

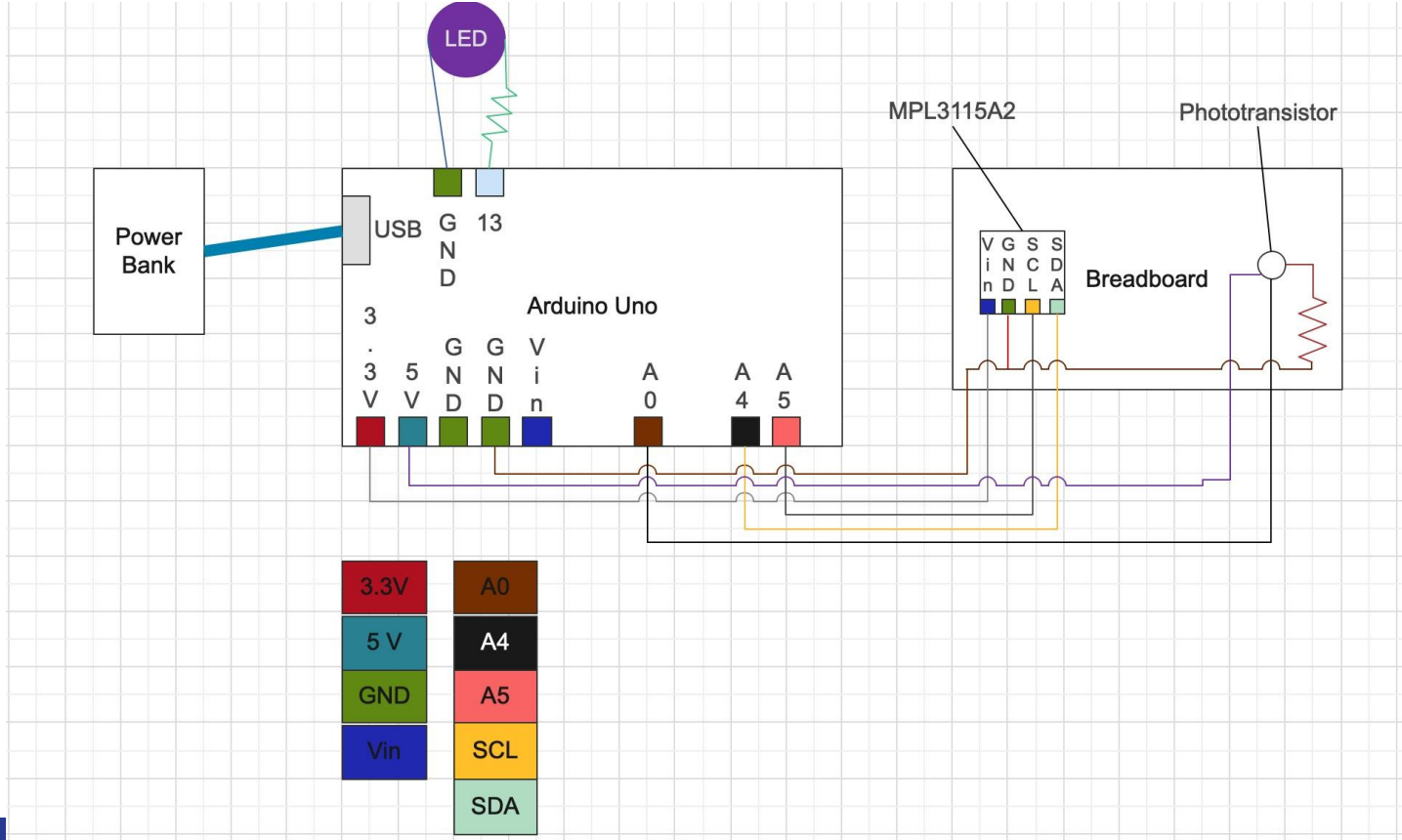
By: Sean Folan

Schematic Diagram



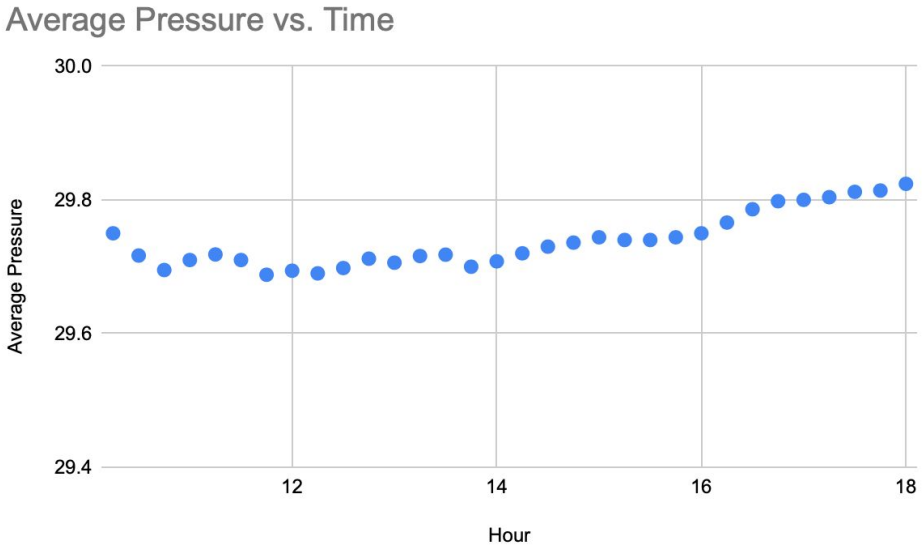
This is my schematic diagram. It shows my apparatus next to the window. It collects barometric pressure and sunlight

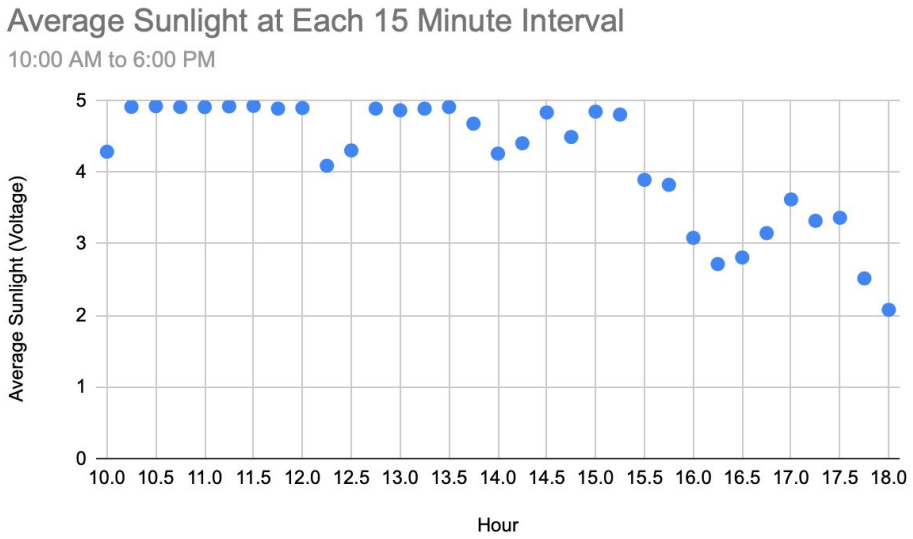
Wiring Diagram



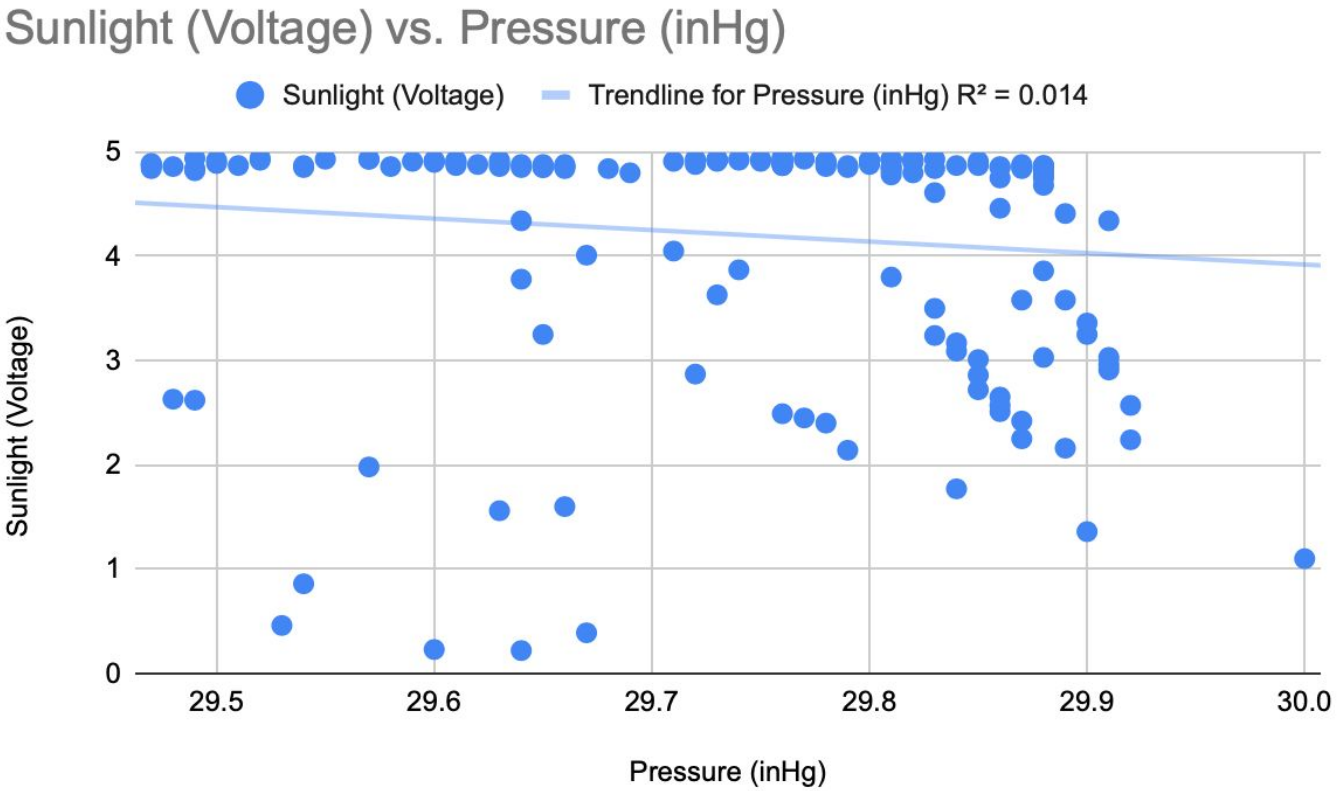
This is my wiring diagram. An interesting feature is that I had to include an LED in order to drain enough power to keep the power bank engaged

Graph of Average Pressure and Sunlight at each 15 minute interval



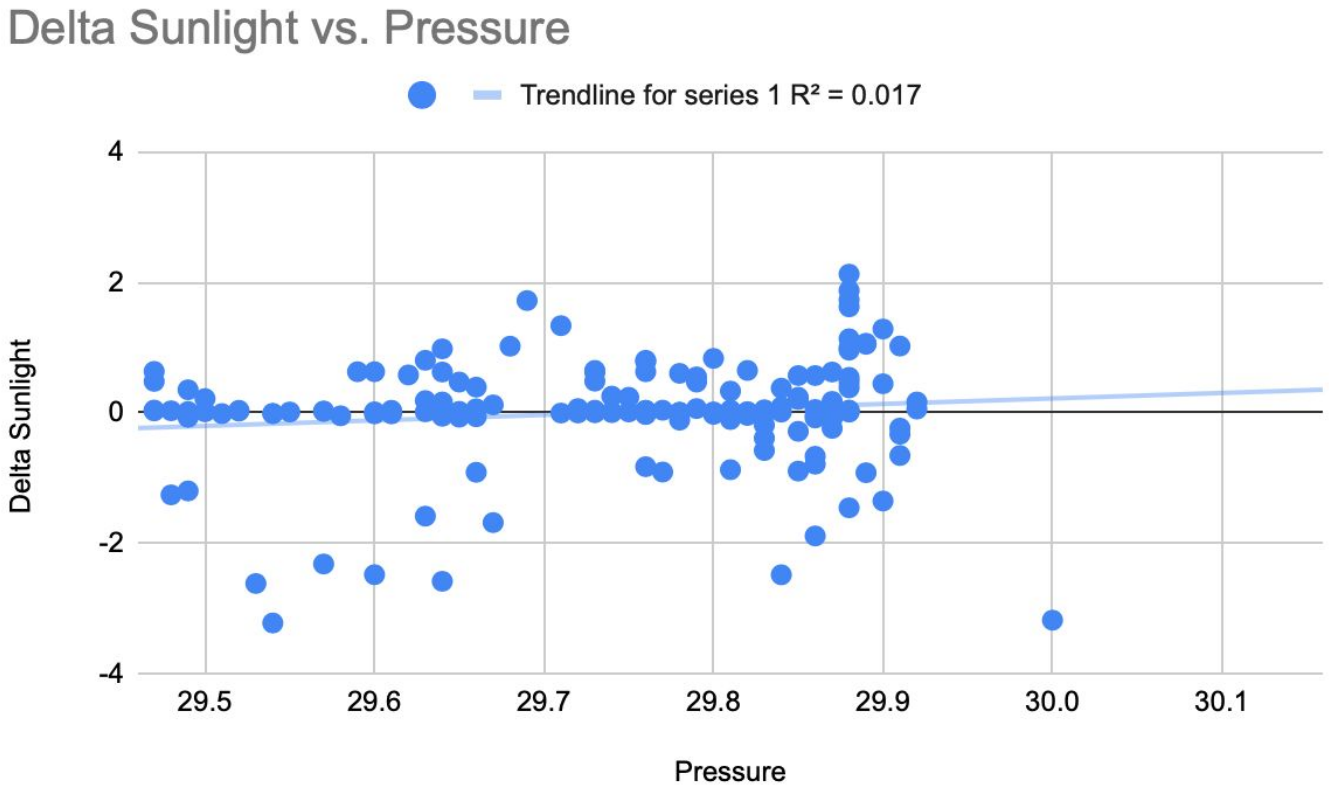


Sunlight vs. Pressure



This graph shows Sunlight and Pressure. It shows little correlation.

Change in Sunlight from Average vs. Pressure



This graph shows the difference from the average sunlight at each time and the pressure. It shows little correlation.

Final Answer

The outcome of this experiment is not what I expected. From watching the weather I had knew that there was a relationship between low pressure systems and bad weather. I thought that this would correlate to lower pressure having lower sunlight but this was not reflected in the data that I collected. In the Sunlight vs. Pressure graph there was a negative trendline with an R^2 of .014 and in the ΔSunlight vs. Pressure graph there was a positive trend with an R^2 of .017. That data is extremely uncorrelated. Therefore, I would say that Barometric Pressure has no direct relationship with Sunlight. I plan to continue to collect data for a few more days since I only have about a week of data so far and expected to have more at this point