

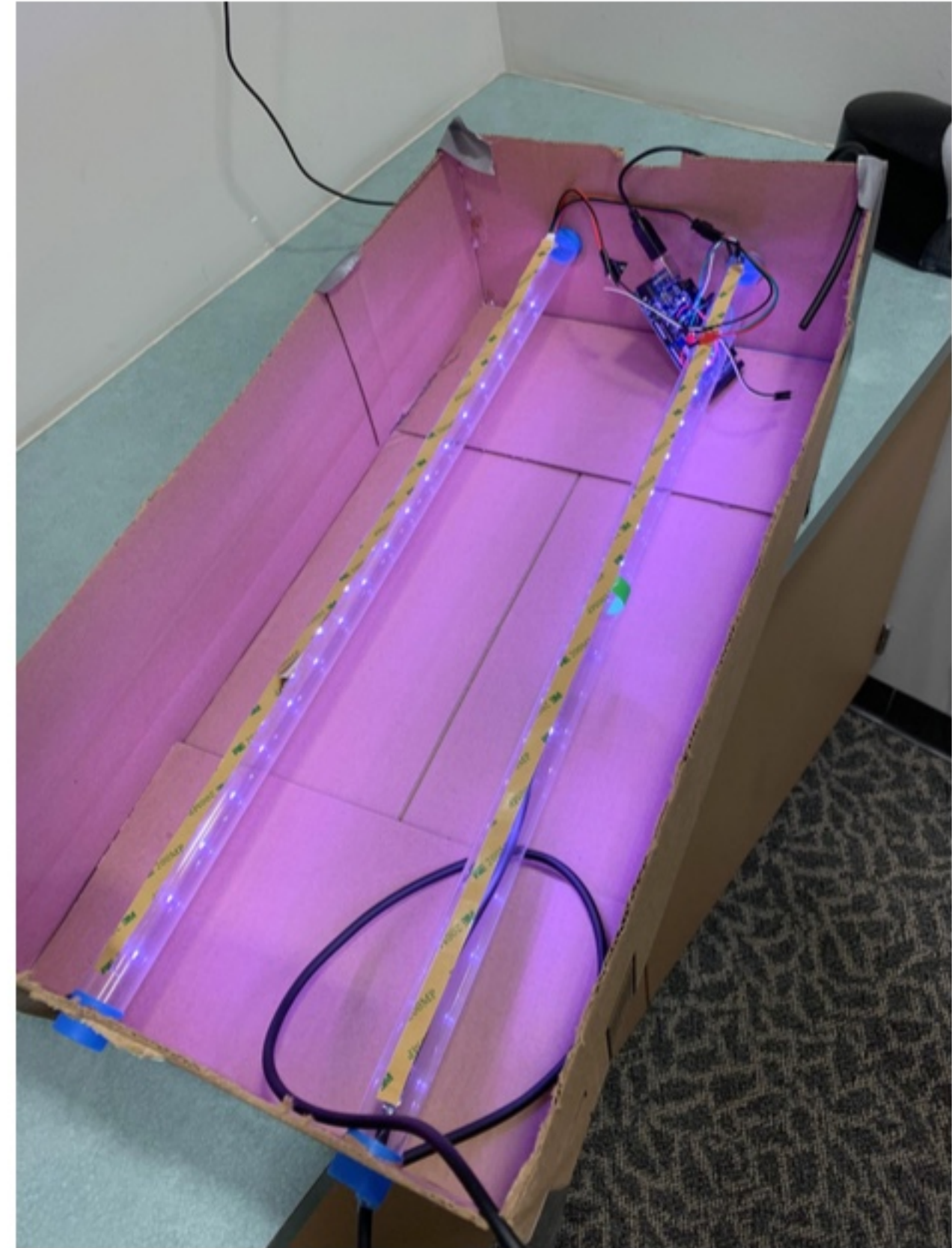
Ayden

Can we culture algae using LEDs and will an enriched CO₂ chamber photosynthesize better than one with normal atmosphere?

I designed, constructed and programmed the test chamber shown to the right.

Possible follow-up / phase 2:

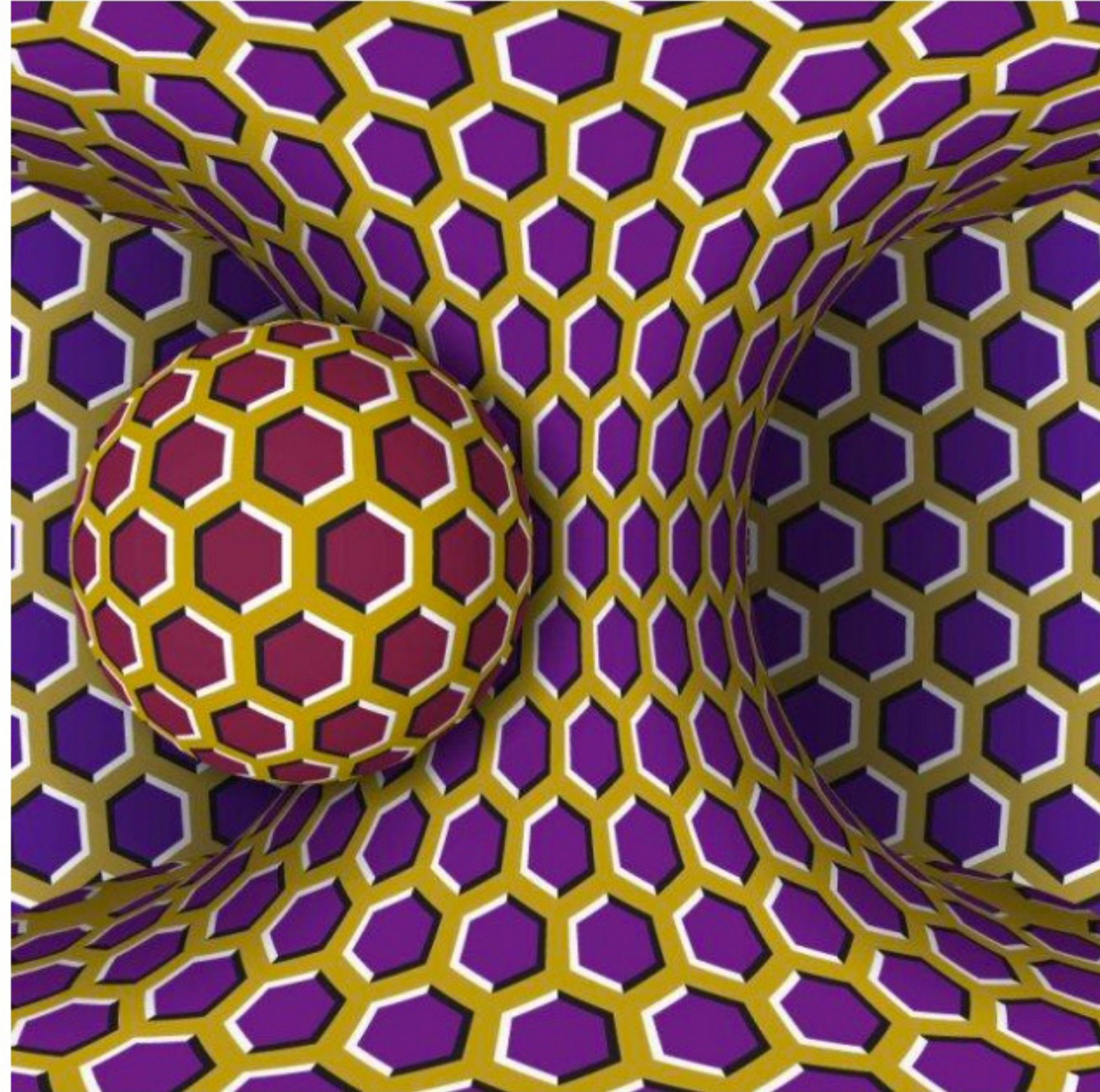
The addressable LED strips will allow me to also investigate which color mixture works best.



Bryan

The goal of my research project is to find out if the pulse rates or stress of the participants are at all related to how they perceive the illusion to the right.

I decided to research this topic because of a recent optical illusion that went viral on social media that claimed it was related to their stress levels.



Claudia

The goal of my project is to find out if adding a new column about screen assists will make it more difficult for the person who “keeps the book” - the team statistician.



Team:		Team Fouls: 1 2 3 4 5 6 7 8 9 10										Full Timeouts: 1 2 3			Overtime Timeouts: 1 2	
Coach:		Points by Quarter										30 Second Timeouts: 1 2				
Players Names:	Number:	Fouls					1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Overtime	Screen Assists	Steals	Assists	Reboun	
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Points Scored:																
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101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140																

A screen assist happens when someone sets a pick or screen on a defender (blocking the defender on offense) and the ball-handler makes a basket off the screen. I want to find out if it is a lot more work to do by adding this onto a score sheet.

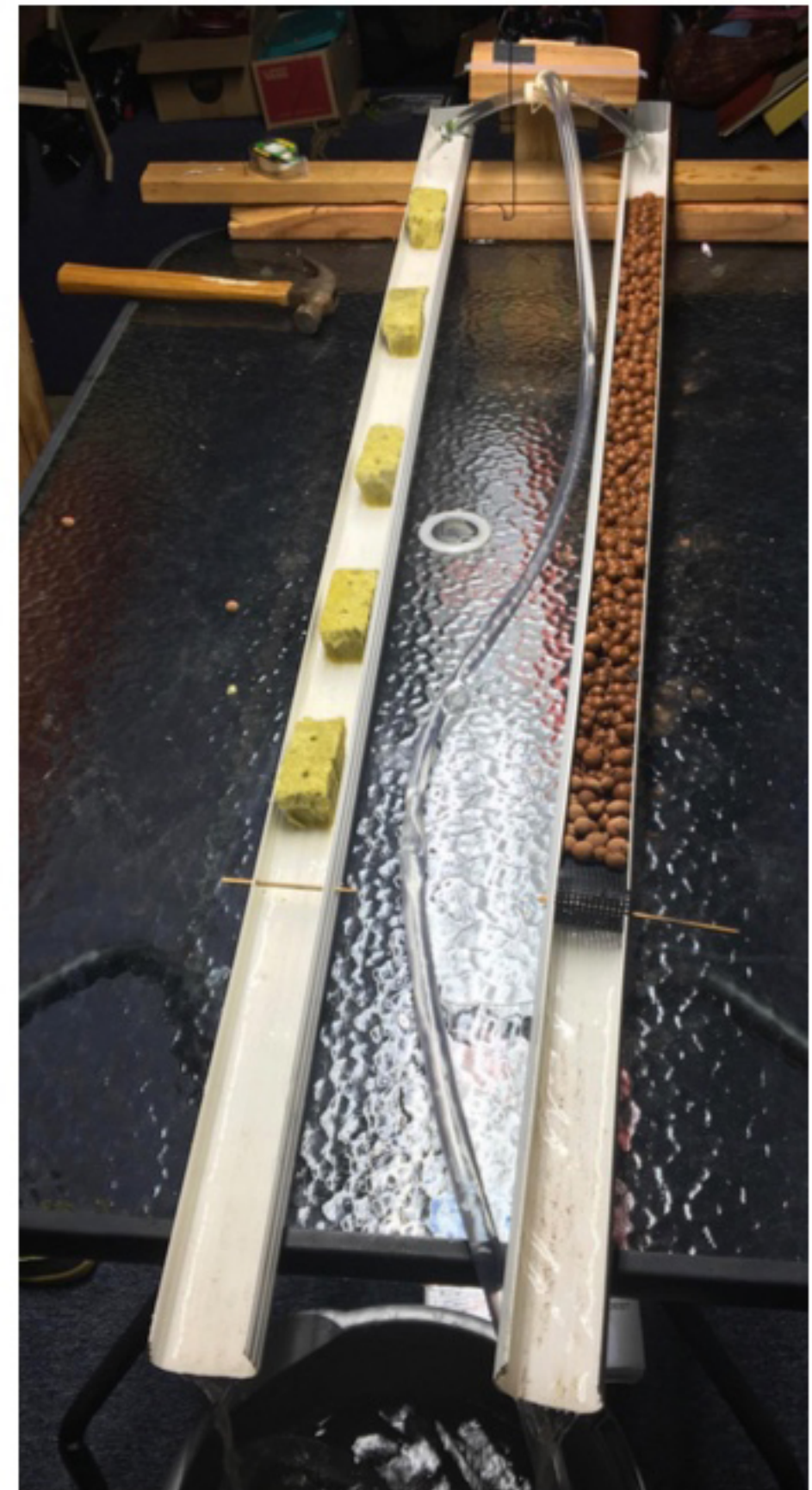
Lidhu

My project is testing the two main substrates used in hydroponics.

I designed and constructed a Nutrient Flow Technique system (NFT) currently housed in my basement

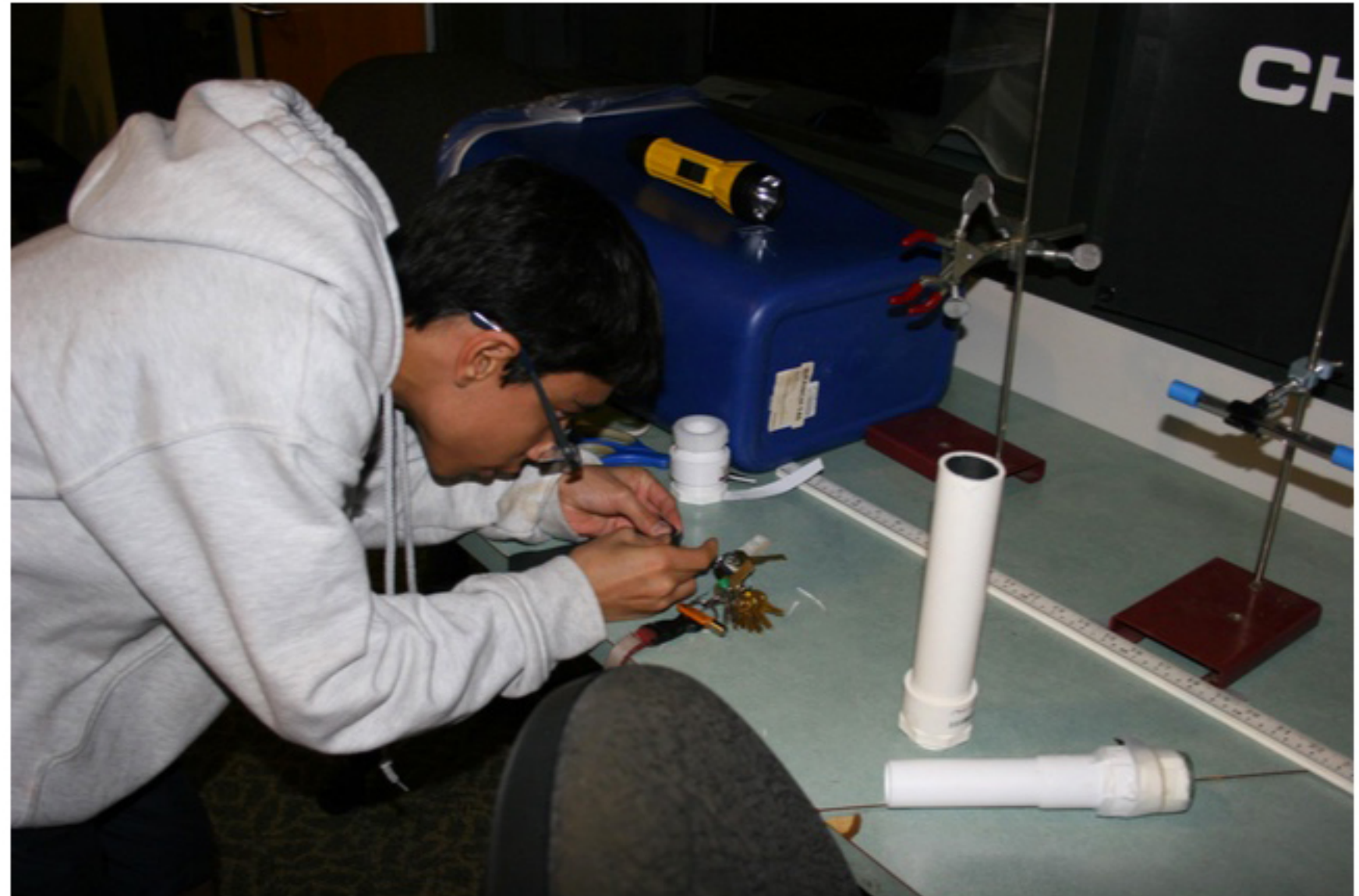
One uses rockwool - the other clay pellets

I'll eventually measure to see if one produces greater amounts of lettuce after six weeks growth.



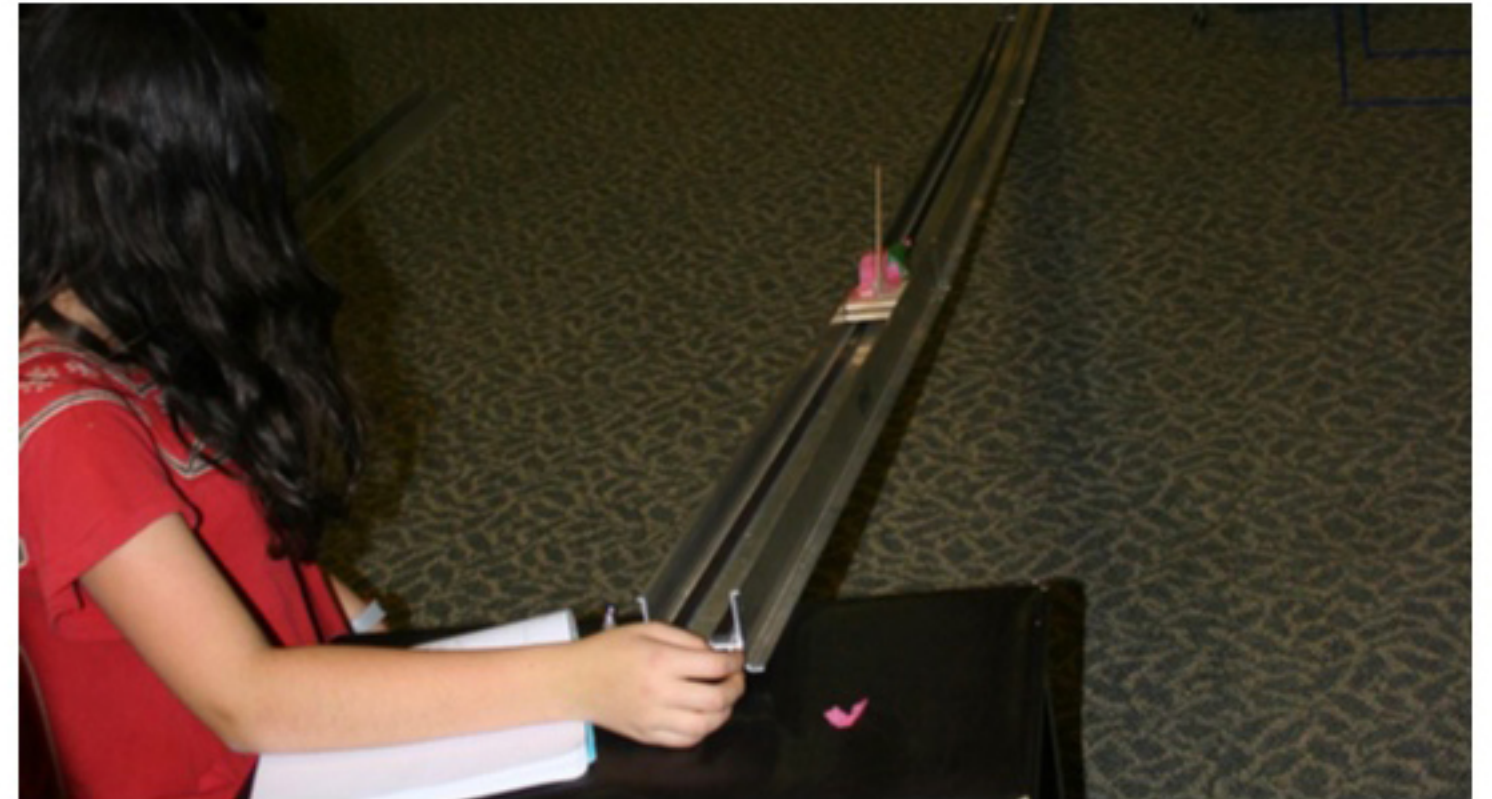
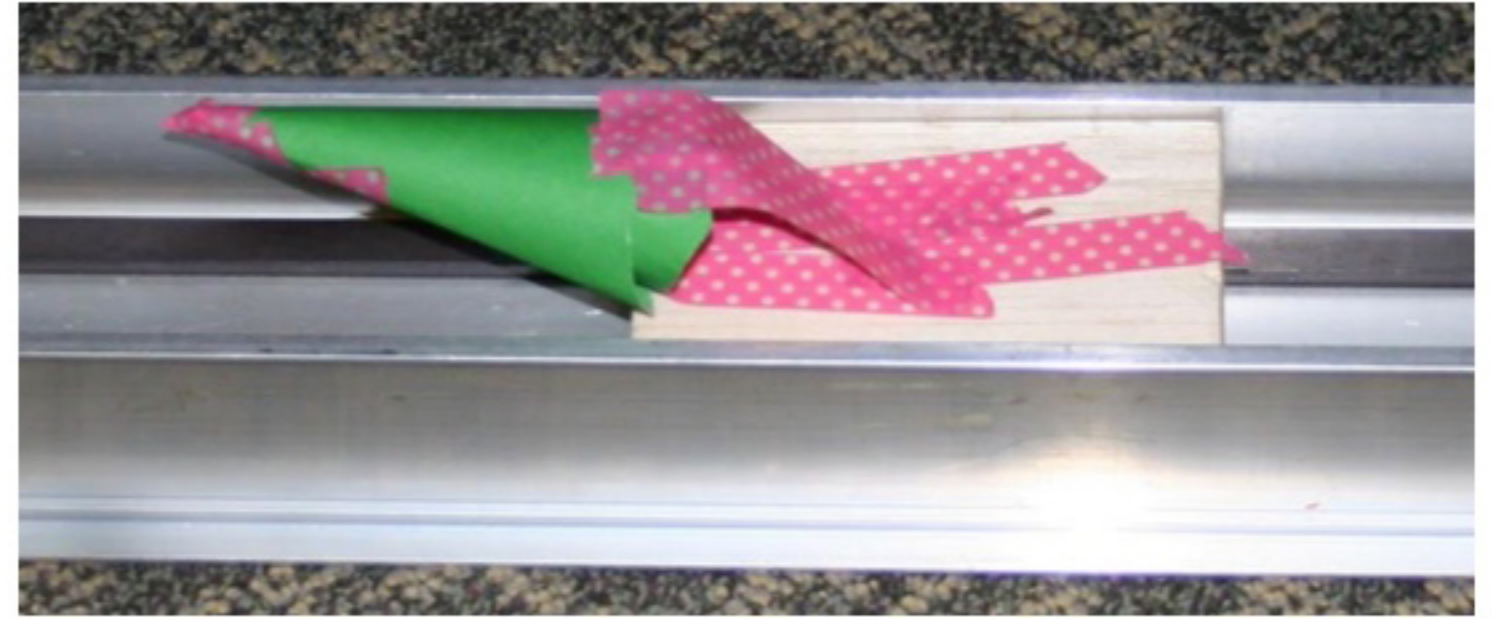
Nick

Last year, in Explore The Universe we were trying to make homemade telescopes to observe the moon. I realized that you could add an extension to the end of our DIY telescopes to improve the clarity of the image. This interest led me to see how coating the inside of my telescope with mylar and black paper affects the amount of light that reached the eyepiece of the telescopes.



Sophia

My experiment deals with the effect of pod shapes on velocity on maglev trains. This was an experiment where I've been testing two different pod shapes on maglev train tracks. I wanted to see which design had a higher velocity and would go faster. The goal of the project was to find the faster pod shape from the designs.

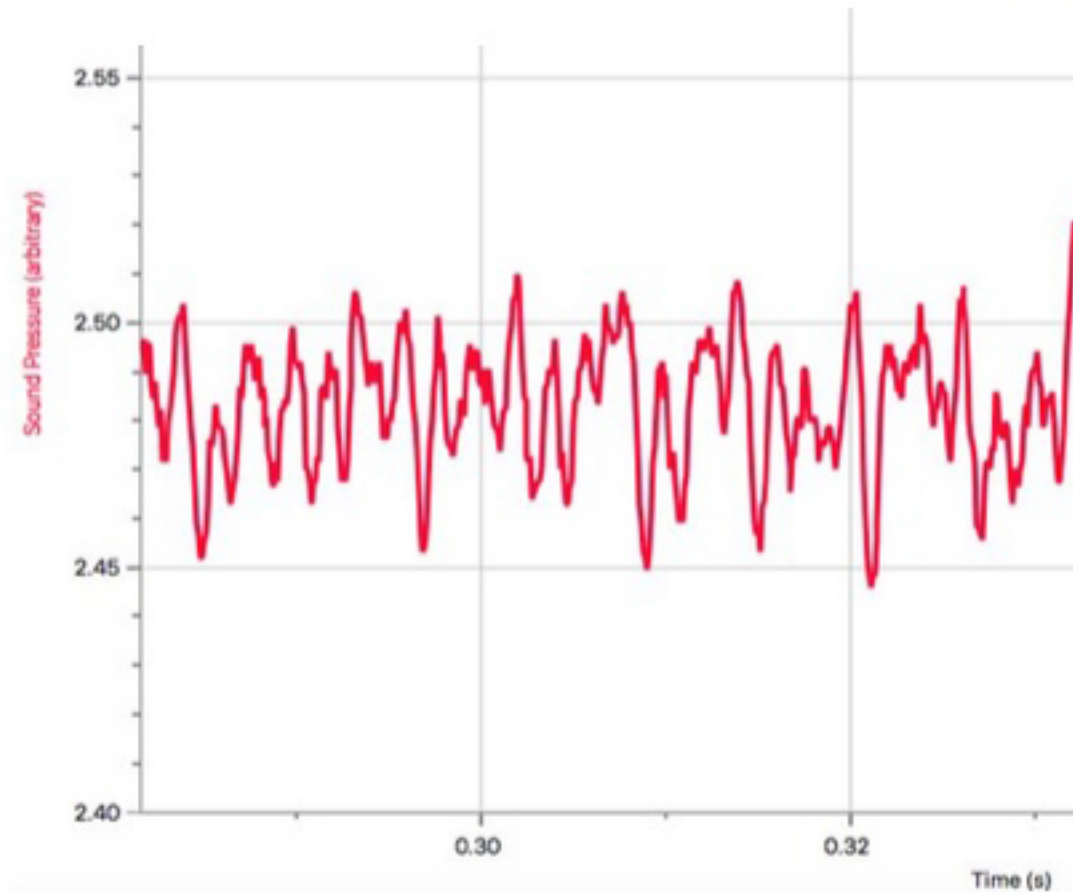


Timothy

I hope to gather data from two drone vantage points. My plan is to have the drone film me throwing a frisbee a distance of 10 meters. My Parrot Bebop 2 will record the flight from two different angles, directly above the flight path and off to one side of the path. I will then import the videos into Logger Pro software to determine which angle is better to allow for analysis of the trajectory.



William



The purpose of my research plan was to investigate overtones in various types of bass instruments. I analyzed these different pitches that were produced by electric and synthesized basses using Logger Pro and Vernier hardware. So far, the results varied and I found that the overtone series for electric basses are louder than those of synthesized basses.

