***The Effects of Microgravity and Light Wavelength on plant growth in an ArduLab***

Experiment Design

First, we need to gather our materials and divide our ArduLab into two equal sections. The divider should be a white opaque material. We will place a camera on each side of the ArduLab. There will be three super-bright blue LEDs with one super-bright red LED on one side and three super-bright red LEDs with one super-bright blue LED on the other side. The lights will stay on for fourteen hours and be turned off for ten hours. One super-bright white LED will be installed on both sides of the ArduLab for the section to appear brighter, therefore enhancing the quality of the image taken by the camera. It will turn on for four seconds and act like a flash on the camera. The LED will turn on three seconds before the picture is taken, and turn off one second after. We will have approximately two centimeters of phytoblend contained in either nylon hose or cheesecloth in each side. We will place eight seeds evenly in the phytoblend (agar). The seeds and phytoblend will be placed on the opposite side from the lights. A grid system of two millimeter increments will be placed on the insides of every wall of the ArduLab except the side with the lights. The cameras will take a photograph when the lights first turn on, and at the seventh hour and just before the lights are turned off at the fourteenth hour. This will repeat daily.

