Grading Criteria for Pre-Academy

# General requirements

* All work in the Archive except for large videos (embed from youtube or vimeo) or big STL files (embed from Sketchfab)
* Make sure you provide all **code** and **files** in original file format they were created so that they are editable (rhino, antimony, solidworks…)

# Introduction week

* Install Ubuntu in your computer
* Install required software
* Create a github repository for the documentation
* Create your web page in your github archive
* Pull and push from the archive
* Document what happened during the week with pictures

# Design week

# Machines and processes week

* Design (or download a design) and make something with some of the machines
* Explain how you designed or where you downloaded the file
* Document the fabrication process with pictures
* Explain materials used
* Explain machine settings used
* Provide design files or link to design files
* Do this for every machine or process used

# Electronics and programming week

### Electronics production

* Produce one board from PNG images or gerber files using the Roland Modela
* Stuff and solder the board
* Program the board using code provided
* Explain the process
* Pictures of the process
* Links to the files used

### Electronics design

* Learn how to edit CAD files using kokopelli
* Learn how to edit circuit boards using Eagle or kiCAD
* Design a new board using Eagle,, kiCAD, kokopelli or similar
* Add at least an LED and button to a microcontroller
* Stuff and solder the board
* Explain the process
* Pictures of the process
* Design files

### Embedded programming

* Using Arduino IDE, C or Assembly:
* Program the board so that the LED blinks
* Program the board so that the LED turns ON when the button is pressed
* Program the board so that you send a message through serial when the button is pressed
* Program the board so that it blinks the LED when a certain message is received
* (Extra credit) Connect two boards through serial and make them talk
* Document the process with pictures
* Provide the code