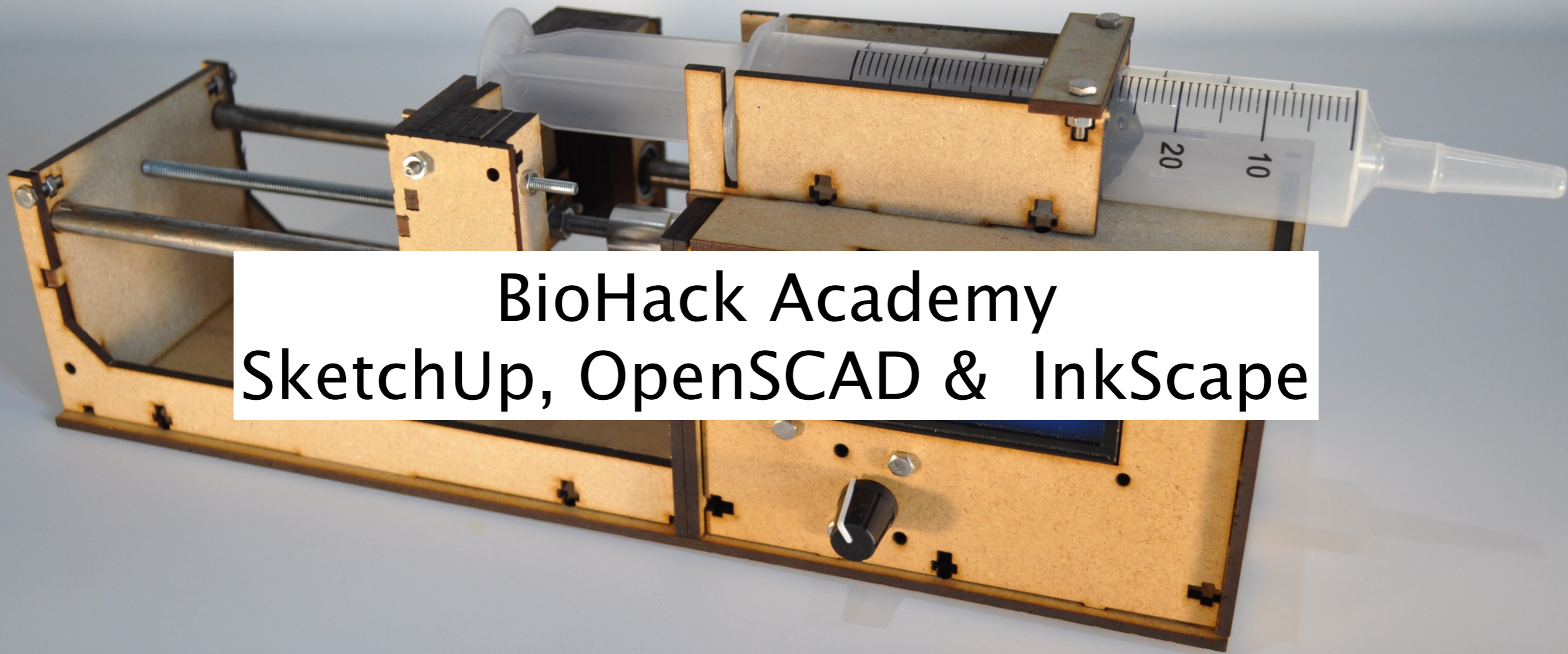




waag society

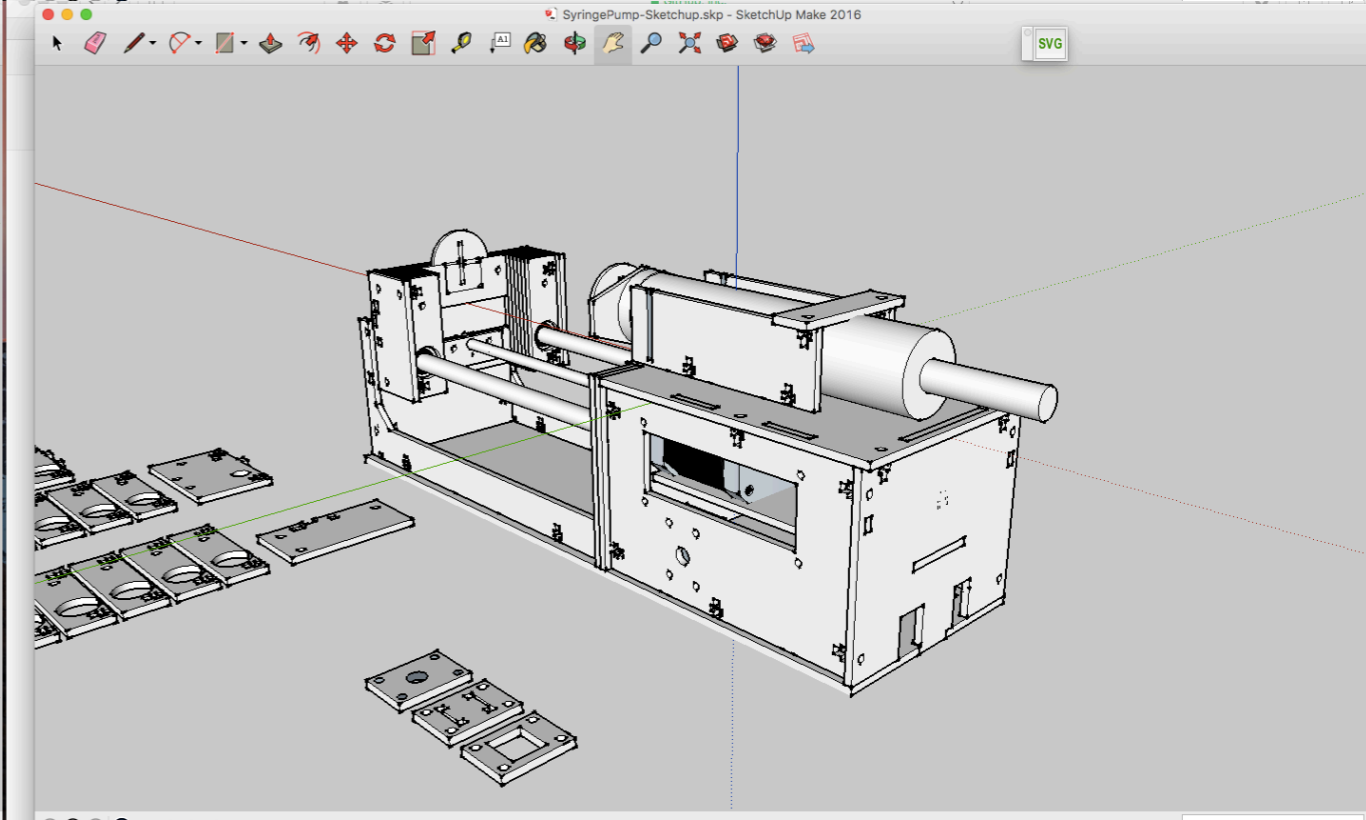
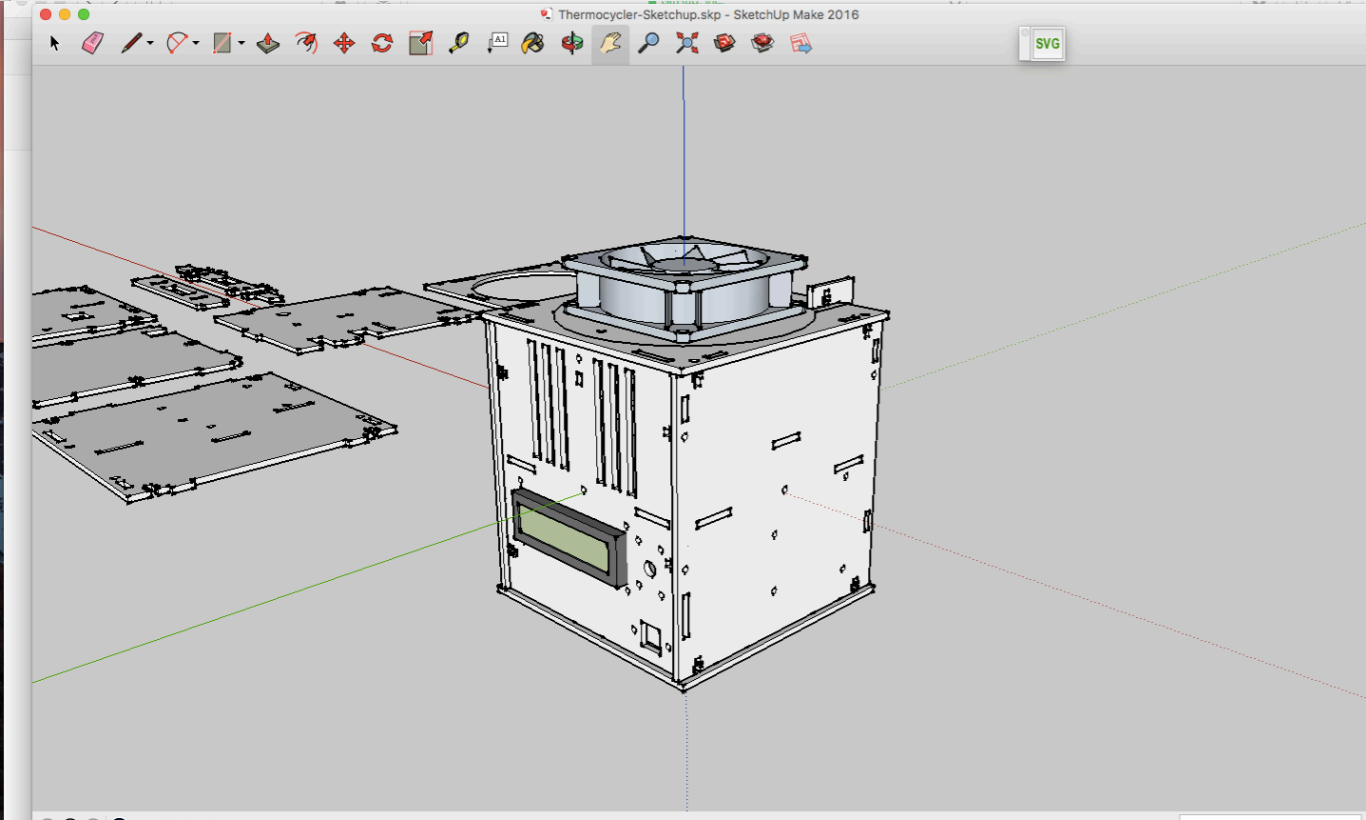
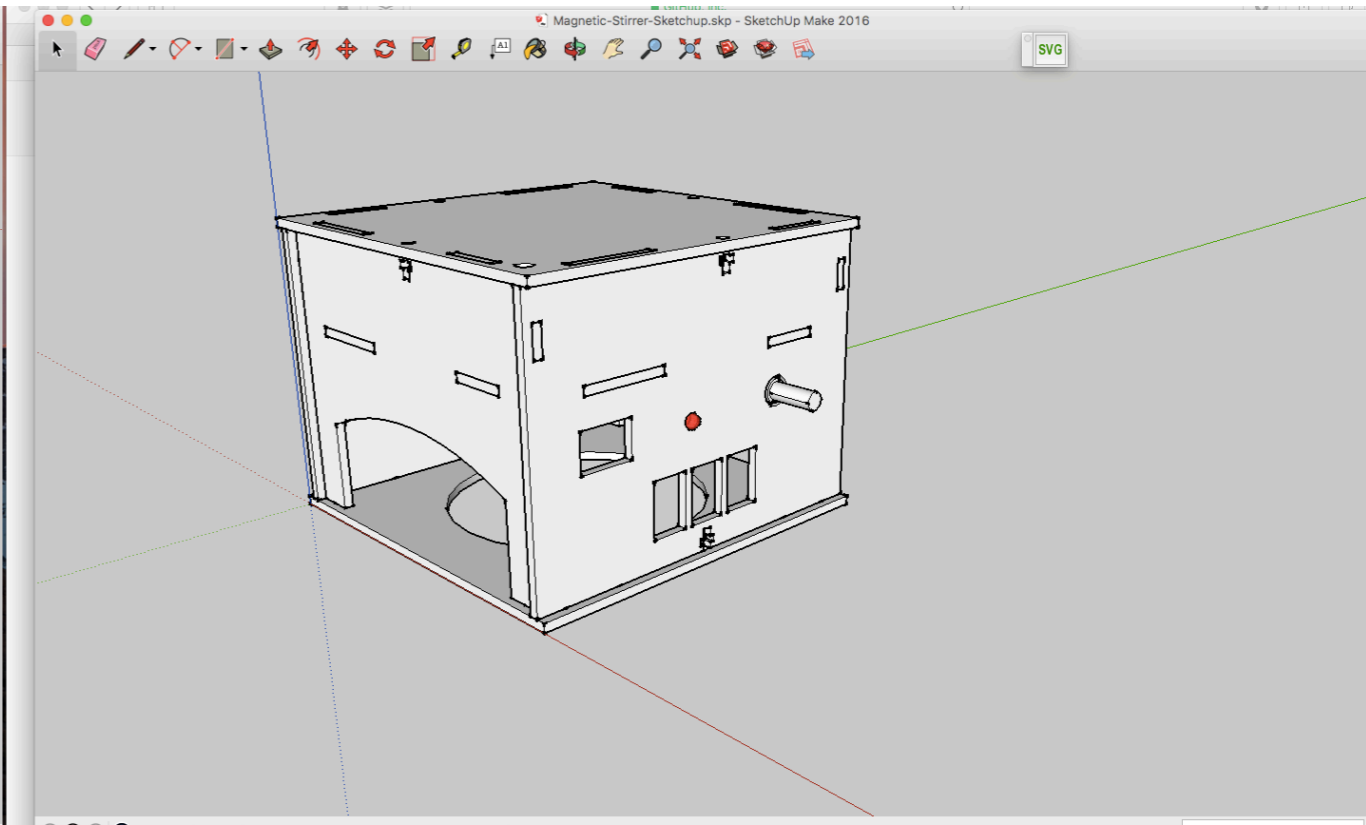
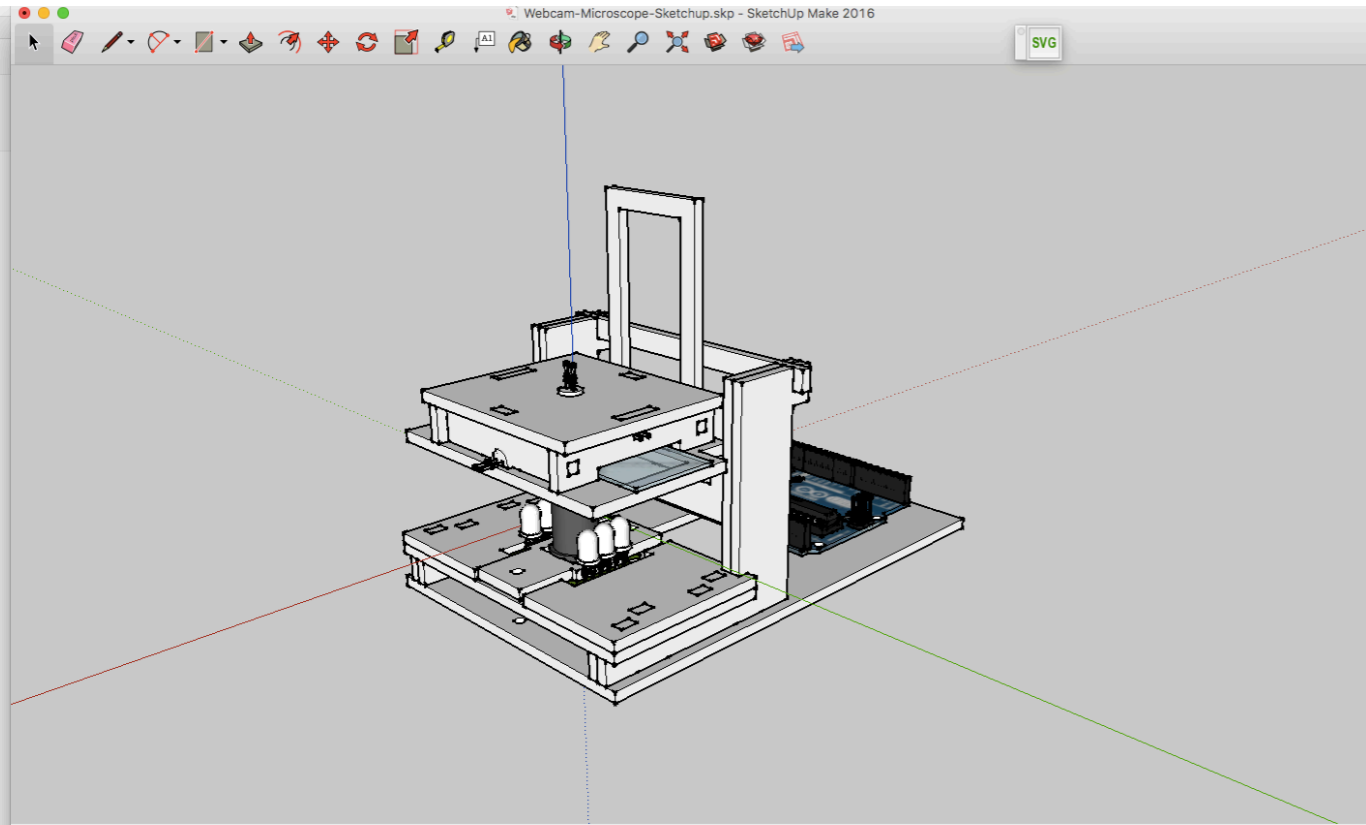
institute for art, science and technology



**BioHack Academy
SketchUp, OpenSCAD & InkScape**

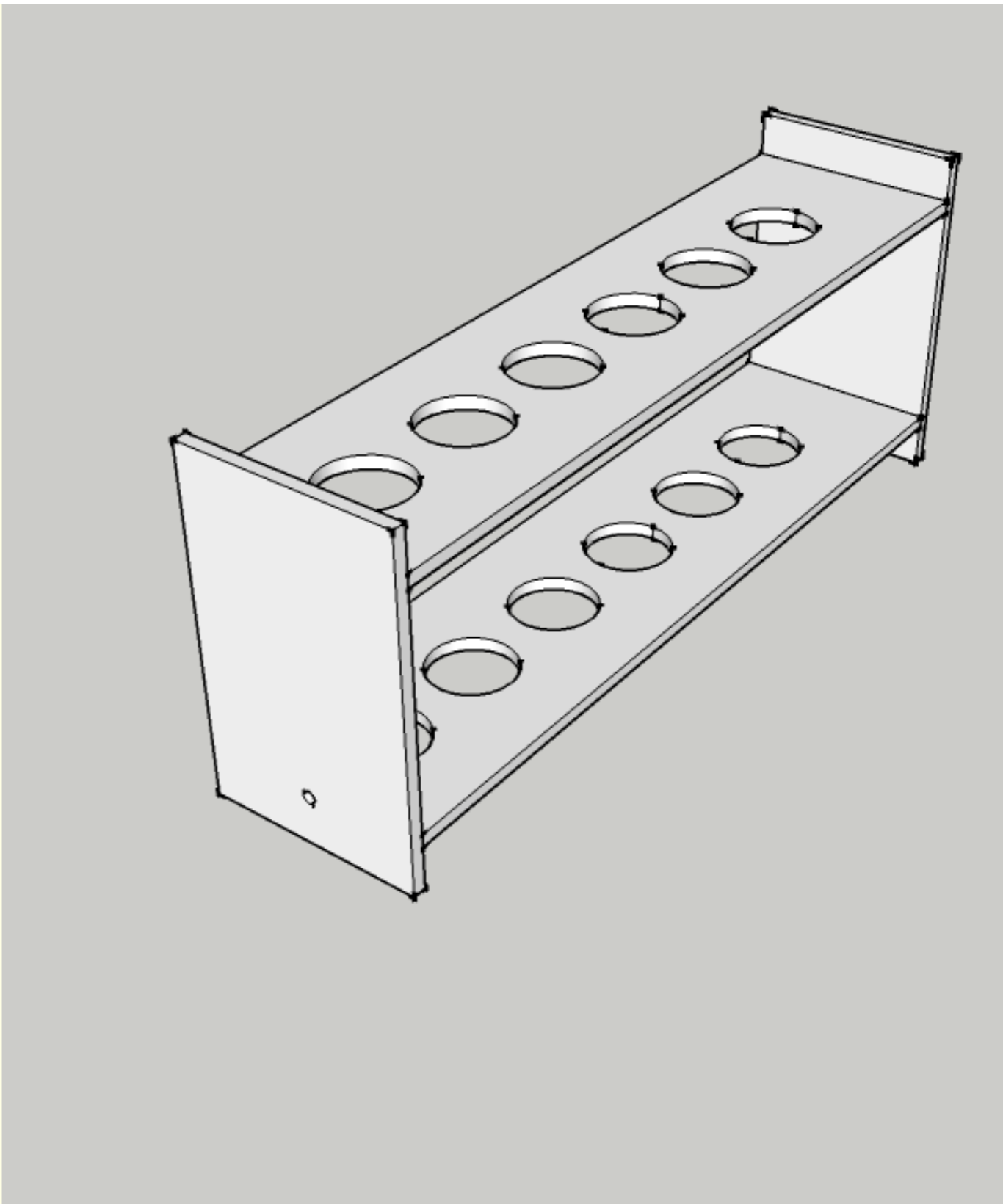
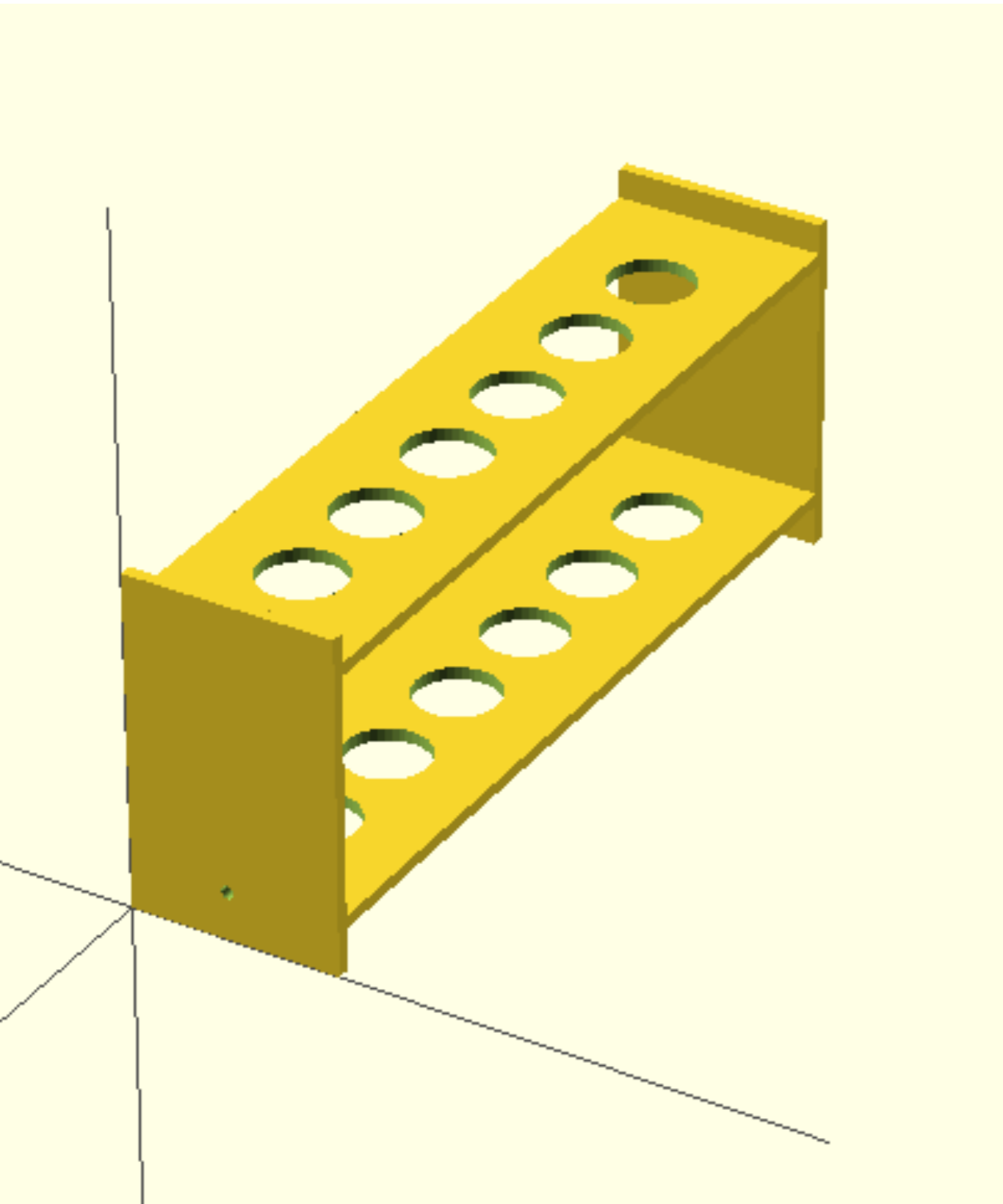


Hacking designs





SketchUp vs OpenSCAD



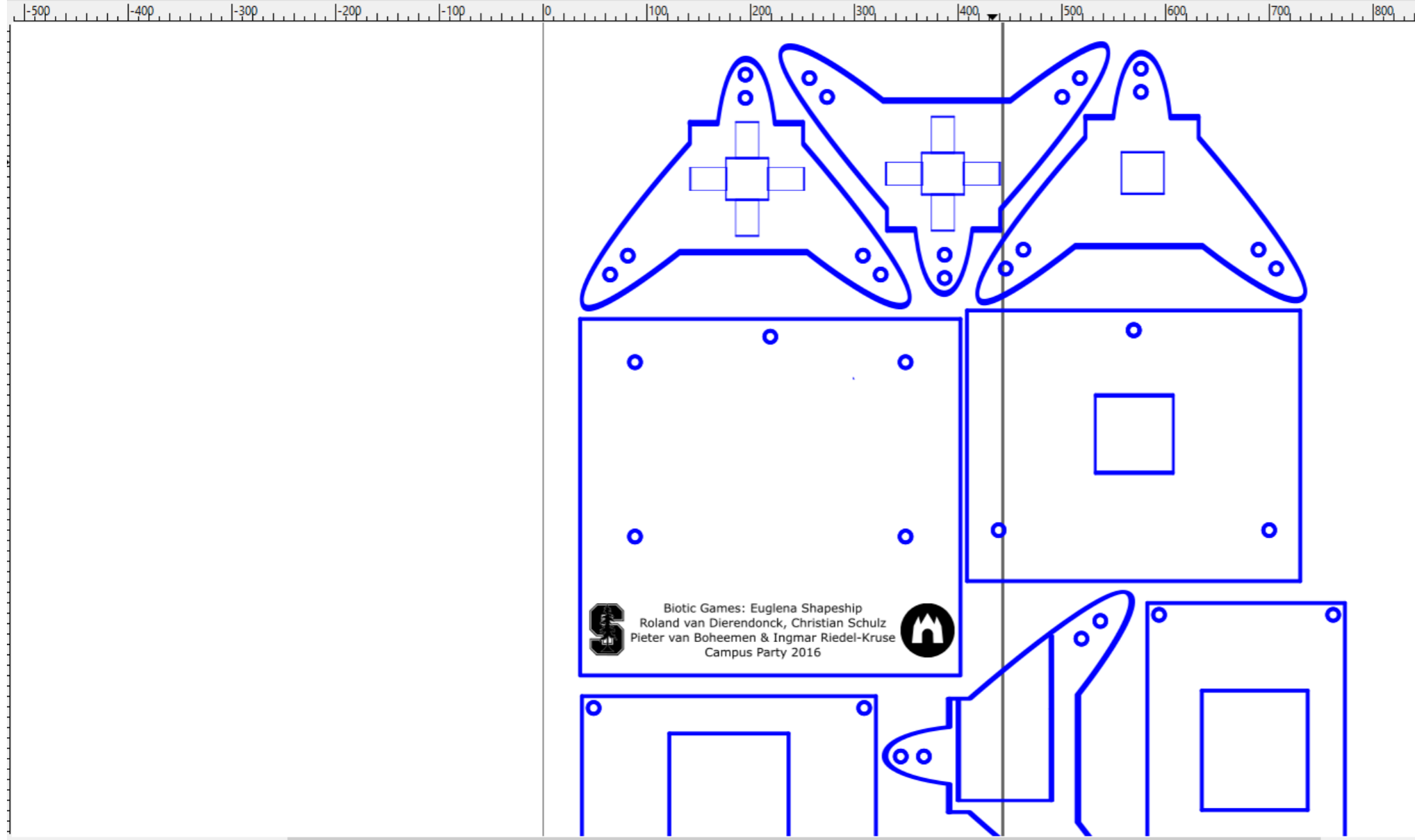


InkScape

oticGamingDevice.svg - Inkscape

Edit View Layer Object Path Text Filters Extensions Help

Tools: X: 34.173 Y: 1070.78 W: 370.448 H: 3.780 px



Align and Distribute (Shift+Ctrl+A)

Relative to: Last selected

Treat selection as group:

Align

Distribute

Rearrange

Remove overlaps

H: 0.0 V: 0.0

Nodes

Relative to: Middle of selection

Align and Distribute (Shift+Ctrl+A)

Export PNG Image (Shift+Ctrl+E)

Layers (Shift+Ctrl+L)

Transform (Shift+Ctrl+M)

Fill and Stroke (Shift+Ctrl+F)

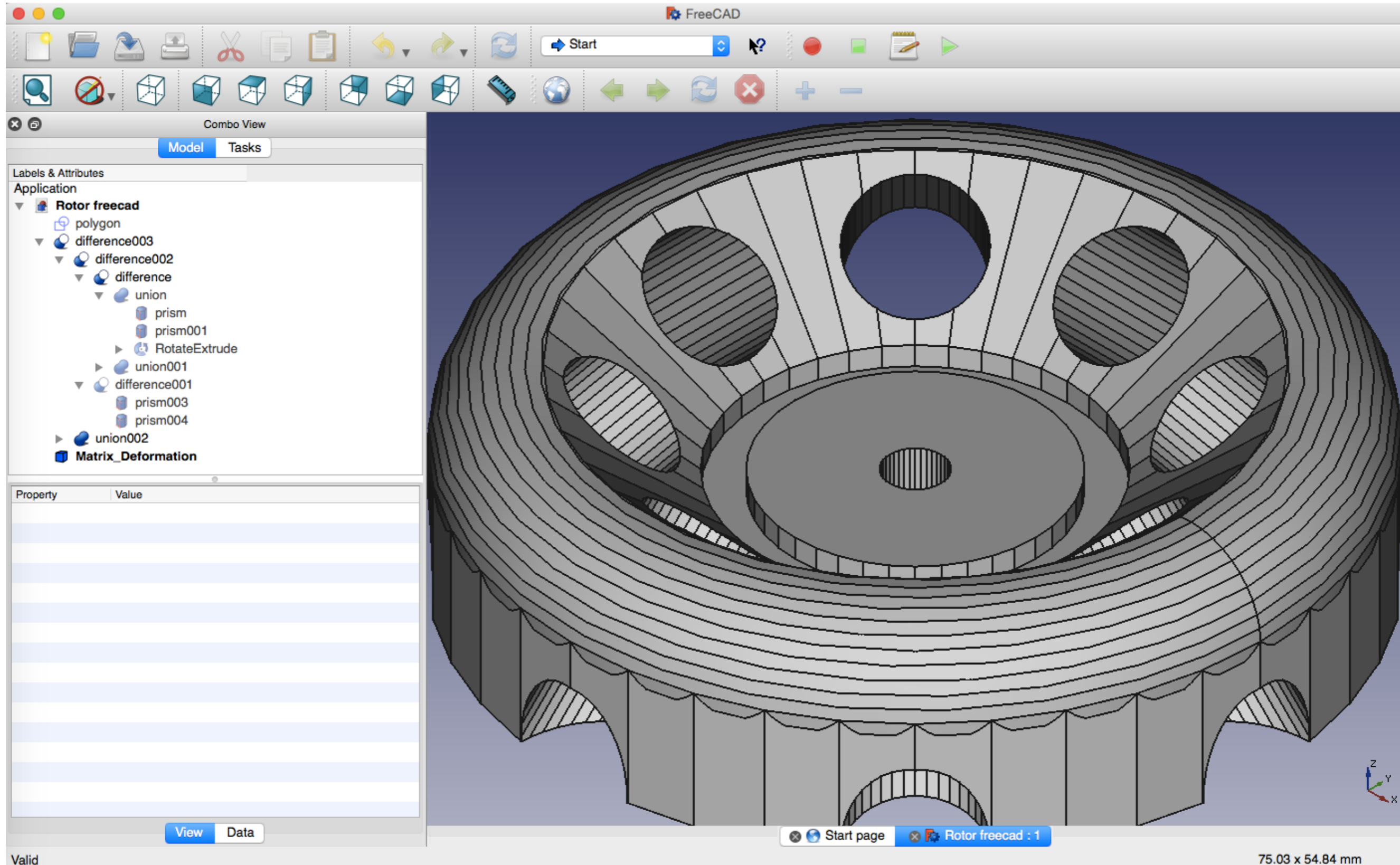
Fill Stroke paint Stroke style

No objects

N/A O: 0 (root) No objects selected. Click, Shift+click, Alt+scroll mouse on top of objects, or drag around objects to select. X: 433.00 Y: 1224.00



optional: FreeCAD





Instruction videos



BioHack Academy

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[Discuss](#)

[Organisms](#)

[Participants](#)

[Repos](#)



Class 1 - Introduction

Synopsys

You are at the start of your journey into the marvelous world of Biohacking. To give you a better insight into what that exactly means, we will start with a short history of Biohacking. Next, we will show you how to design objects in 2D and 3D and transform them into real objects with a lasercutter or 3D printer. During the lab days as a demo we will make basic lab utilities, such as tube racks. Finally, we will take a first look at electronics.

Schedule

- Introduction
- History of BioHacking
- Biosafety & Maker ethics
- 3D Design
- Sterile Hood Design
- Practicals
 - Tour around your lab
 - Digital Fabrication / 3D CAD Design
 - [Sketchup Box Demo video](#)
 - [Sketchup Box Demo file](#)
 - [Tube Rack Sketchup Demo file](#)
 - [Tube Rack OpenSCAD Demo file](#)
 - [Sketchup SVG Export video](#)

Devices

<http://biohackacademy.github.io/bha5/class/1/>

This week we will build our first Open Hardware lab device: the sterile hood. The design files can be



**some
rights
reserved**