The background is a dark grey, textured surface resembling chalkboard paint. Scattered around the central text are various white line-art icons representing scientific and technical concepts. These include: a pair of safety goggles in the top left; a DNA double helix in the top right; a microscope on the right side; a test tube with liquid levels on the left; an atomic model with three elliptical orbits in the bottom left; a beaker with measurement markings in the bottom right; and several abstract, flowing wavy lines at the top and bottom. The central text is in a clean, white, sans-serif font.

# INTRODUCTION TO SOLIDWORKS

COURTNEY KREITZER



# BACKGROUND

In the spring semester of my sophomore year, I took Engineering Design 1, which was an introduction to various concepts in engineering. In the first few weeks of the course, we focused on building CAD-modelling skills in Solidworks. As I had only CADded in BlocksCAD before, I started as a novice.



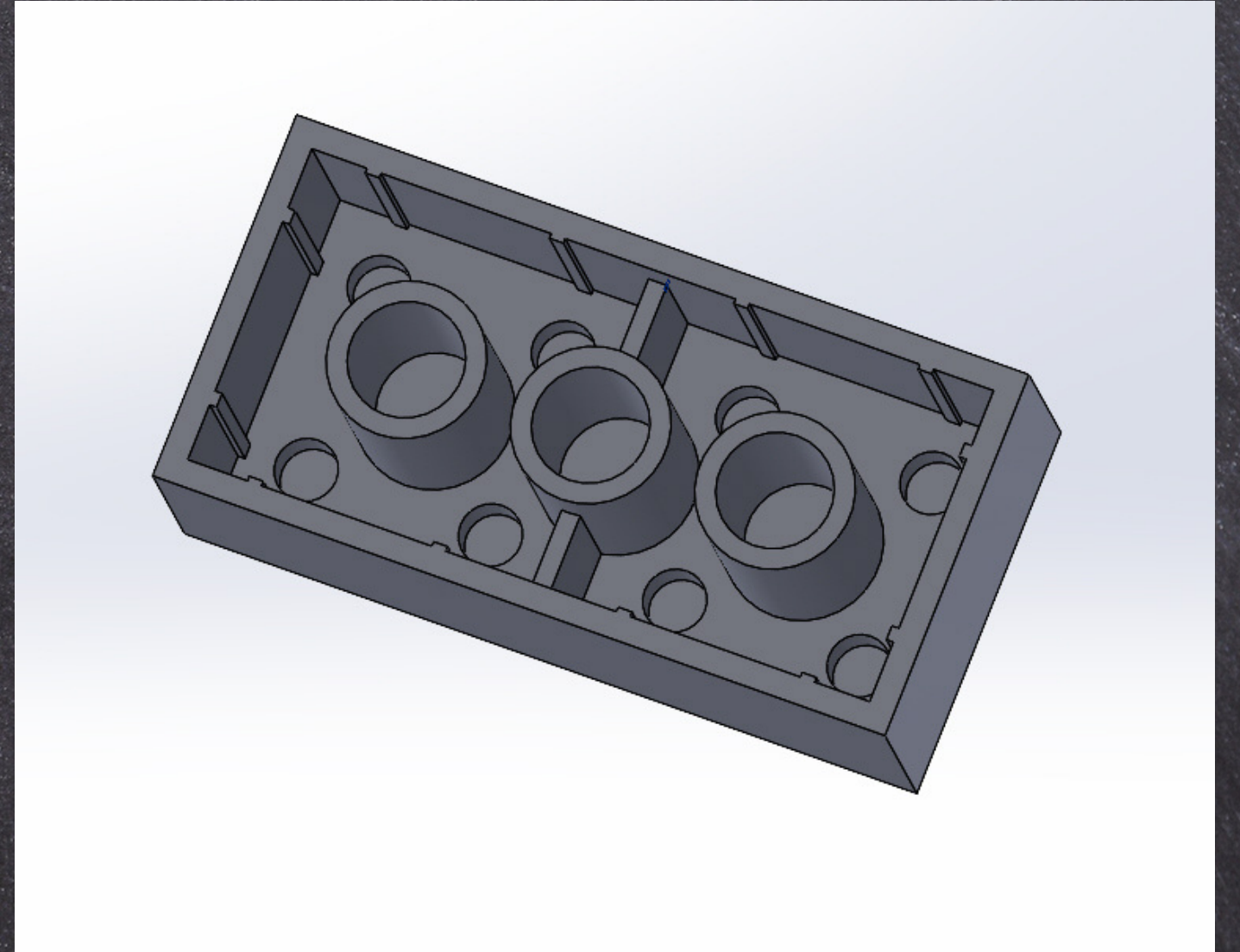
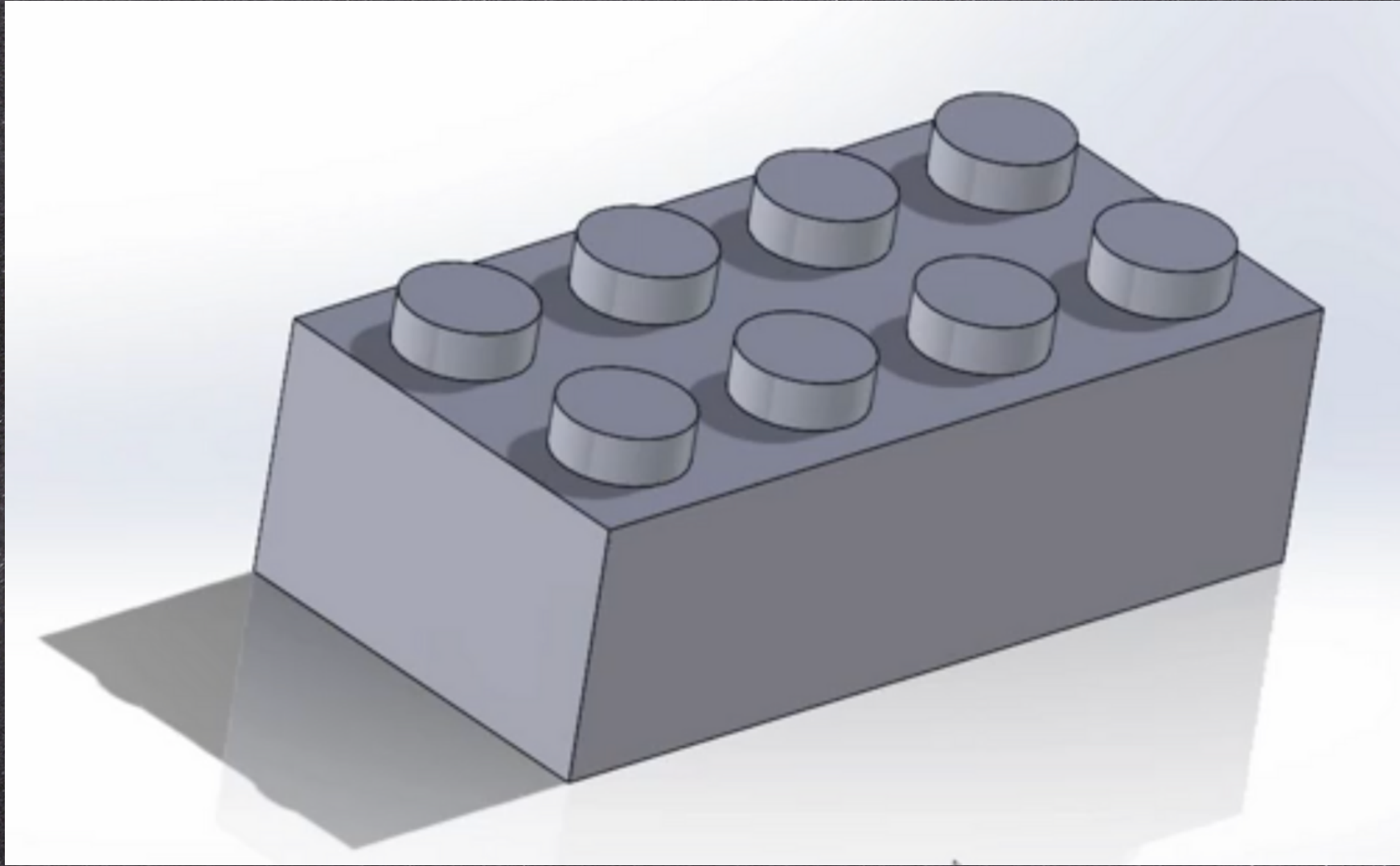


# ASSIGNMENT

The assignment was to build 4 models in SolidWorks: a LEGO brick, a support base, a juicer assembly, and a pumpkin. I was provided videos of SolidWorks tips and tricks that aided in the building process.



# LEGO



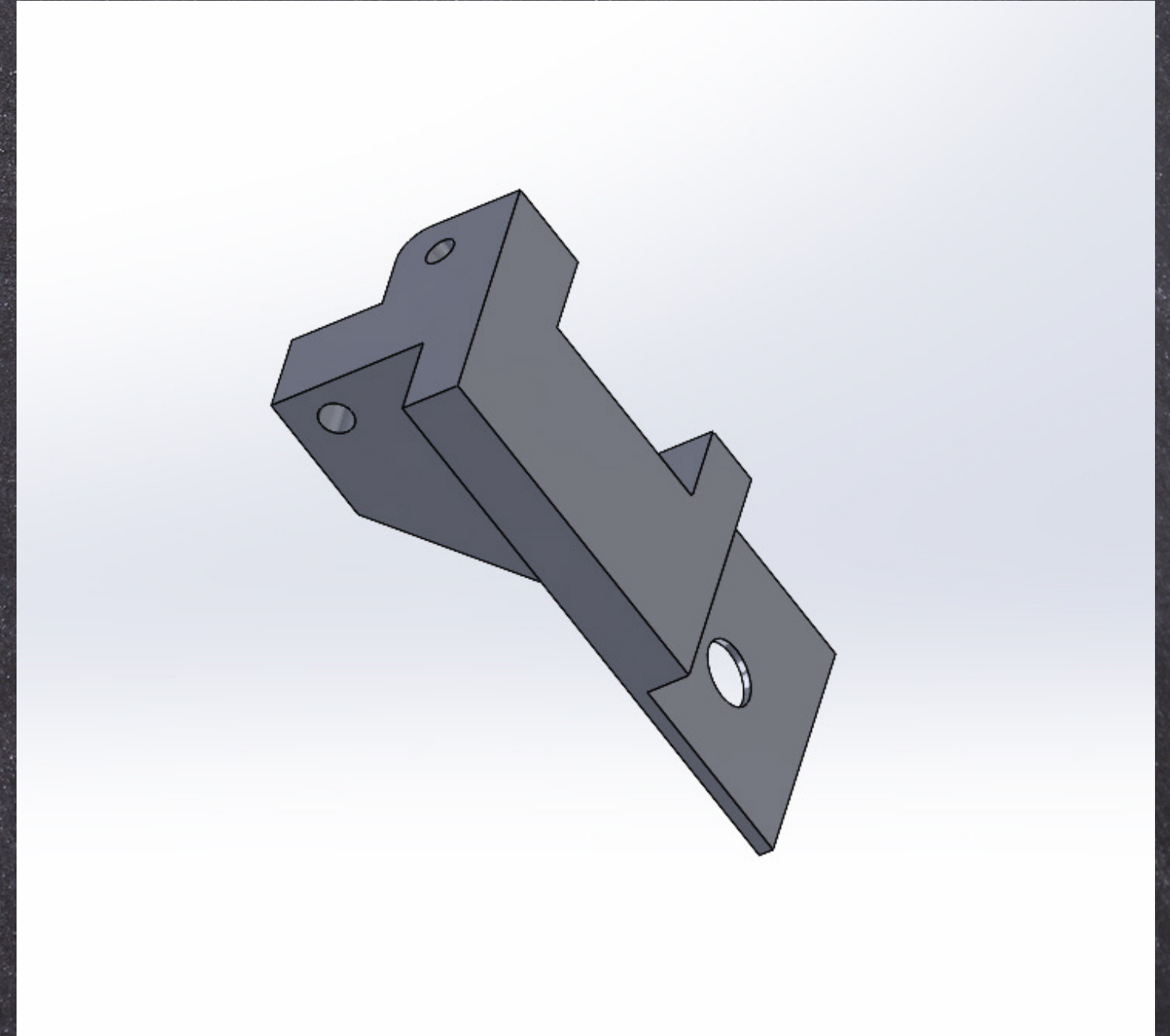
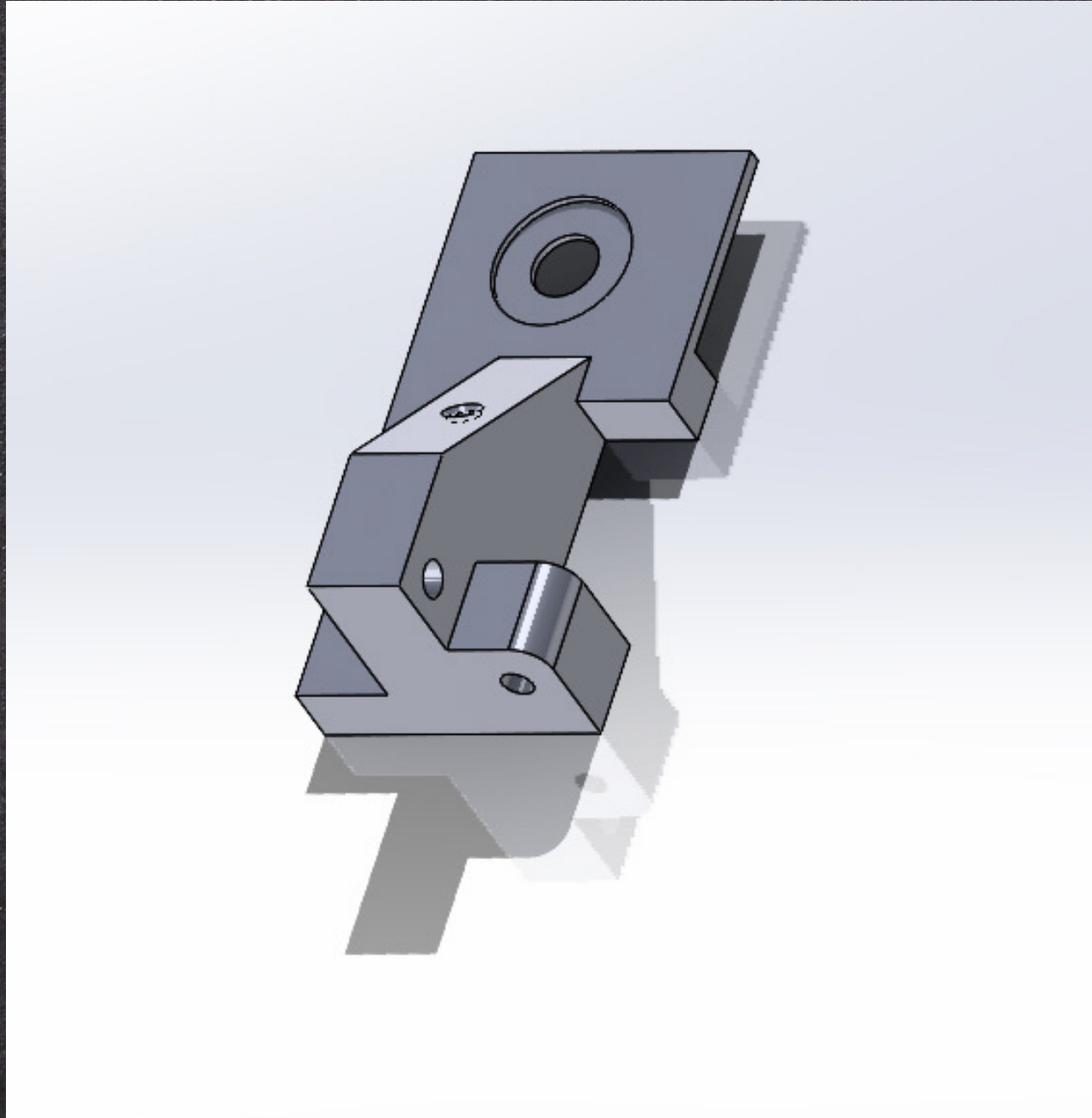


# WHAT I LEARNED: LEGO

- How to install SolidWorks and save with Box
- Extrude Boss Base
- Smart Dimension tool
- Linear Patterns
- Mirror Entities
- Shelling
- Offsetting
- Extruded Cut
- Centerlines



# SUPPORT BASE



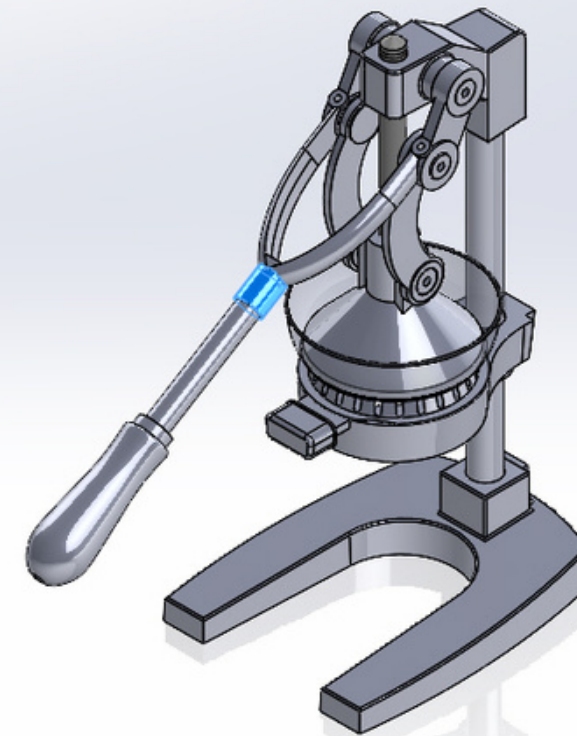
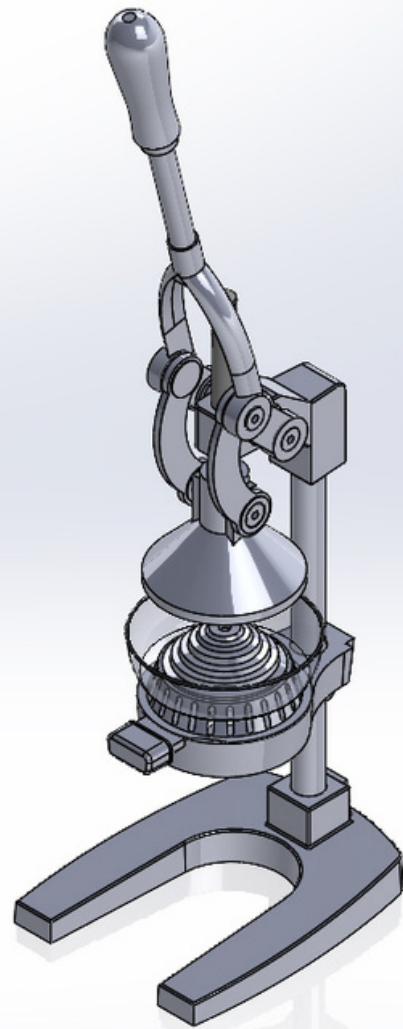


# WHAT I LEARNED: SUPPORT BASE

- Changing Orientations
- Free Drawing
- Hole Wizard - Tapped Hole
- More experience with extrusion / cutting



# JUICER ASSEMBLY





# WHAT I LEARNED: JUICER ASSEMBLY

- Assembly mode in SolidWorks
- How to align parts for assembly
- Mate objects tool
- Lock rotation
- Subassemblies



# PUMPKIN





# WHAT I LEARNED: PUMPKIN

- Creating Planes
- Lofting
- Adding Color
- Sweep Feature
- Defining and Redefining the Sweep





# THANK YOU!

Feel free to reach out with any questions

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