

## Wednesday March 02, 2022

Today's Goal:

- Look at different designs of a beverage holder
- Figure out what are the differences between hot and cold holders
- Create montage of 30 different designs

Notes:

- Dispensers:
  - Pros:
    - It won't shatter when dropped or knocked over, eliminating the safety hazard of broken glass. Plastic also offers a lighter option for those who need lighter weight objects in their home for increased mobility.
  - Cons:
    1. Dispensers need to be checked routinely. This takes money away from the user if repairs need to be made.
    2. Water for dispensers needs to change regularly as well. The large bottles may be heavy for some. These bottles also take up lots of space
    3. Dispensers are less convenient than regular beverage holders
- Mugs:
  - Pros:
    - They're good to use for both cold and hot beverages and are microwave-safe! Ceramic mugs are the most neutral in terms of flavor. They do not hold on to flavors from other drinks. You can enjoy a variety of beverages in them without lingering smells or flavors.
  - Cons:
    1. Mugs tend to be smaller in size; less liquids can be held
    2. Since they are generally made of glass and ceramic, mugs are prone to breaking
    3. Mugs can be difficult to keep clean
- Water bottles:
  - Pros:
    - They can store the temperature of the water just as you keep it in the bottles. It can be hot or cold
  - Cons:
    1. Usually made out of unusable plastic.
    2. Does not have the ability to maintain high or low beverage temperatures.
- Thermos:
  - Pros:
    - A good thermos should have excellent hot and cold retention. It should never leak, be convenient to use and carry, and be easy to clean, not retaining residual flavors or odors from drink-to-drink.
  - Cons:
    1. If metal is used then the bottle can develop rust easily
    2. Hard to clean
    3. Can be quite heavy.

### Challenges:

- We found a lot of different options for our final build, but while we were looking through the different designs, we could not figure out what we could do for our project, we needed something original and creative for the project.

## Accomplishments:

- We found 30 images that would give us inspiration for the project
  - We also did some research on those inspirations and found the pros and cons of the different design
  - We also commented on each of the images

## Hot n Cold Design Challenge: Research

Thursday March 03, 2022

## Today's Goal:

- Create mind map or morphological chart for Hot n Cold design challenge
  - Decide on a theme for our beverage holders.

## Notes:

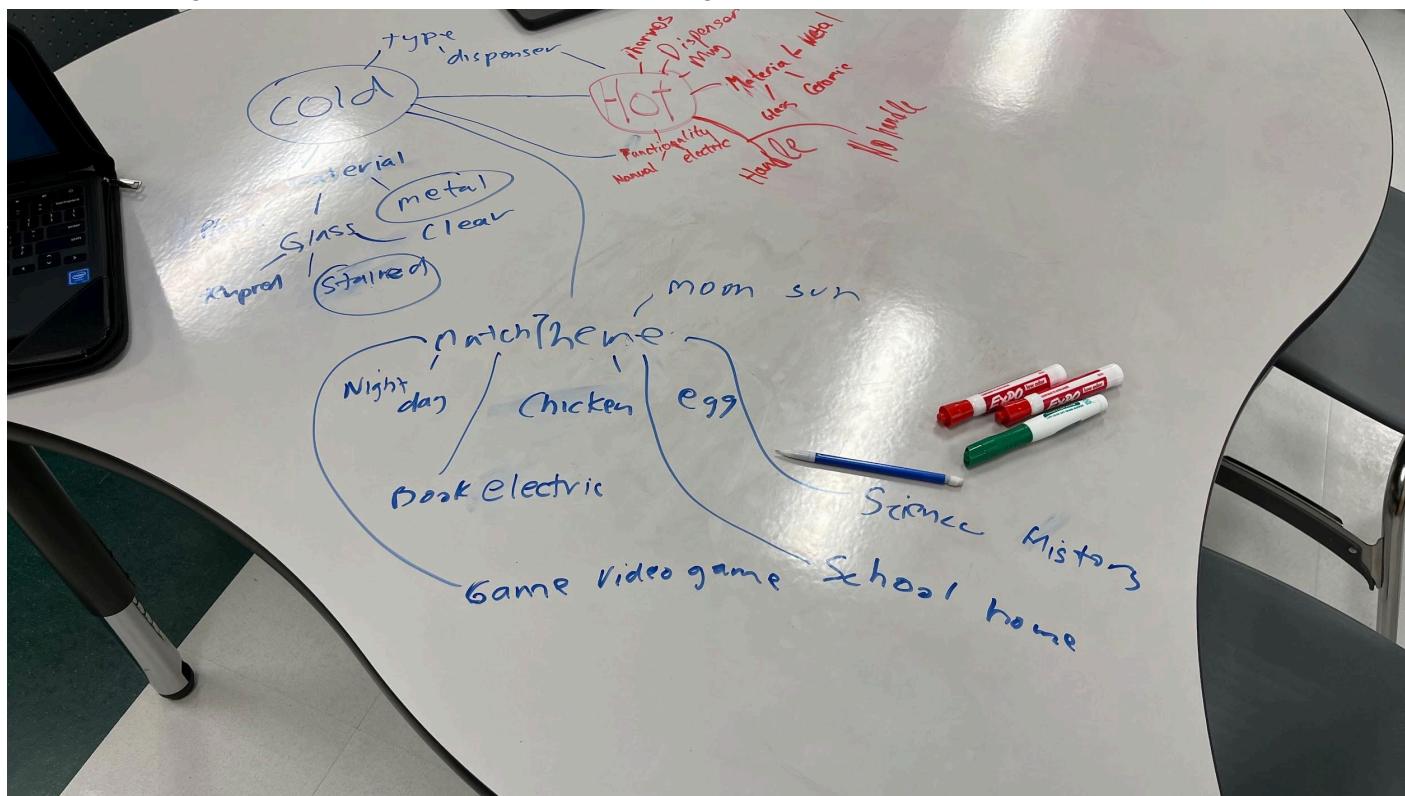
- Psychological concept of “left-brainedness” and “right-brainedness.”

## Accomplishments:

We chose creating a mind map over a morphological chart. The chart focuses on the topics "Hot" and "Cold." The material, type of holder and functionality of the holder were considered. On the cold side of our map

### Challenges:

- We struggled with imagining possible themes. Since there are already so many existing concepts for beverage holders, it was hard to think of an original idea.



## Friday March 04, 2022

Today's Goal:

- Decide on the theme of our build
- Catch up on all the things that we had to do from the previous classes

Notes:

- Concept and cohesiveness: Does the concept include a mutual element of design amongst all of its parts? Can the components be sold together as a set?
  - **Yes, our concept has a mutual element in their design, since we chose to make our theme chicken and the egg, it gives a story behind the design, like the question everyone keeps on asking: What came first the chicken or the egg?**
- Craftsmanship and attention to detail: Can you create the concept with clean and precise attention to detail? (You may not know HOW to just yet but that's ok)
  - **Our product will have a lot of attention to detail because we know how to use the onshape tools, we will texture and make our design more realistic by using extrude and the filet tool**
- Functionality and practicality: Does the design consider both form and function? Can it work effectively?
  -
- Originality and creativity: Is the idea original or are you replicating / heavily relying on an existing design?
  - **This idea is original. We considered, “things that go together” and chickens and eggs came to mind.**
- Comprehension of tools, techniques and processes: Does the design allow you to demonstrate the tools and skills we have learned? Does it enable you to expand on these skills and incorporate some level of challenge for you?
  - **The components of our design incorporate many tools we've already learned in Onshape(extrude, filet, spline etc.) There is some level of challenge since there are abstract shapes.**

Accomplishments:

- We decided to go with the “Chicken & Egg” theme”.
- We caught up on all the stuff that was going on

## Tuesday March 08, 2022

Today's Goal:

- Begin creating possible solution drawings for Hot n Cold beverage holders

Challenges:

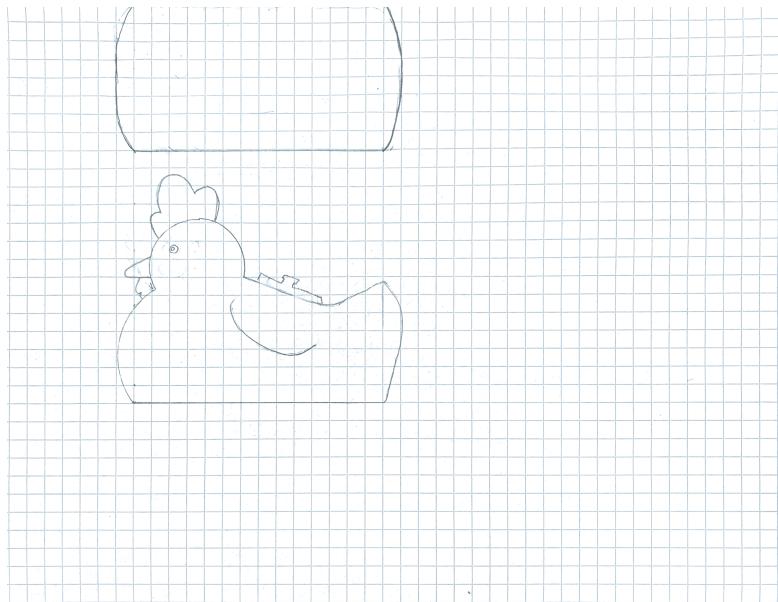
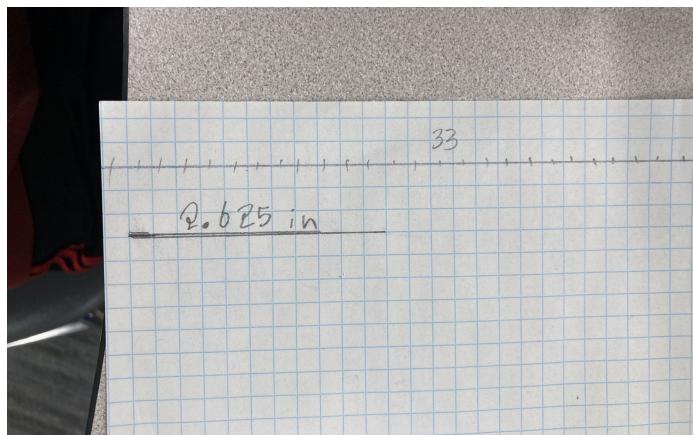
- The complex shape of a chicken, one of our hot beverage designs, is hard to draw in the front and top view.
- Drawing mugs, which are already small objects, to a smaller scale is somewhat challenging.

Notes:

- We learned how to draw mugs in orthographic projection. The main difference from the bridge drawings is the exclusion of a bottom view.

Accomplishments:

Today we began sketching and creating outlines for our possible solution drawings:



## Wednesday March 09, 2022

Today's Goal:

- Finish sketching our 4 possible solution drawings.

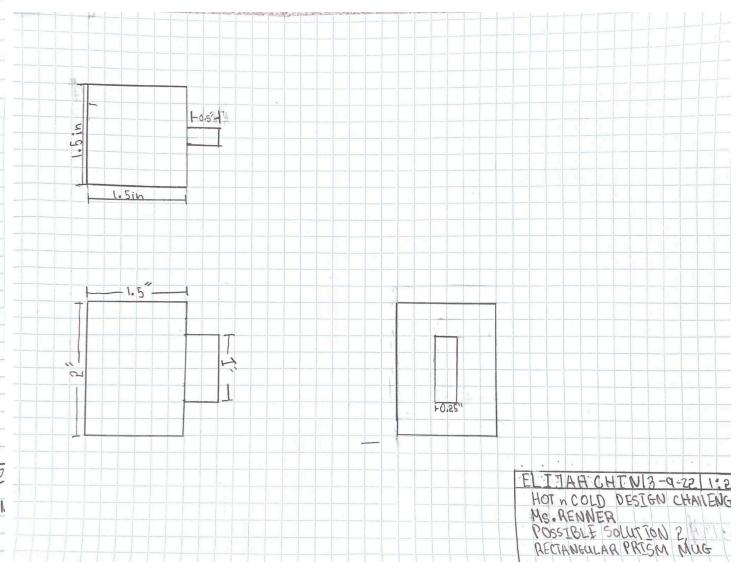
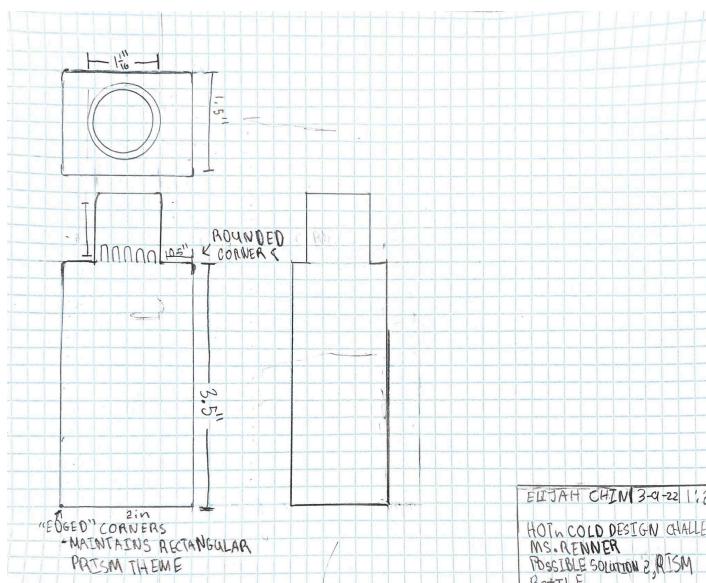
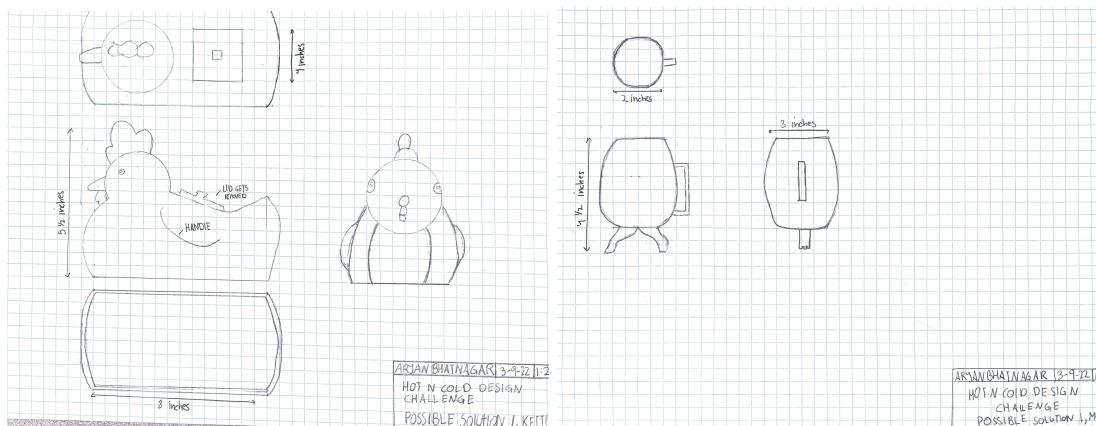
Challenges:

- Using the protractor to make circles was difficult. To overcome this, we simply used circle outlines instead.

Notes:

- We made 4 sketches
  - 2 hot - Chicken Kettle, Square/ Prism Mug
  - 2 cold - Egg Mug, Rectangular Prism Water Bottle

Accomplishments: We finished all of our possible solution drawings. The first possible solution includes a chicken and an egg. The chicken is a kettle that will be our hot beverage holder. The egg is a mug with two chicken feet coming from its bottom. It will hold cold beverages. Possible solution two includes two "prism" beverage holders. Normally, mugs and bottles have more rounded corners. This design, however, goes against that by sharpening those corners to form rectangular and square shaped products. The bottle is designed to hold cold beverages while the mug is designed to hold hot beverages.



## Thursday March 10, 2022

Today's Goal:

- Research ideas and tools for the chicken and egg project.

Challenges:

- Understanding Onshape tools from articles and text proved to be tough. To overcome this, we instead looked to videos and visual representations for a more clear understanding of onshape's components.

Notes:

- Chicken
  - [Loft \(Video\)](#)
  - Revolve
  - Extrude
  - Spline
  - Filet
  - Line
  - [Sweep](#)
- Egg Mug (and feet):
  - Revolve
  - Filet
  - [Boolean](#)
  - [Thicken](#)
  - Extrude

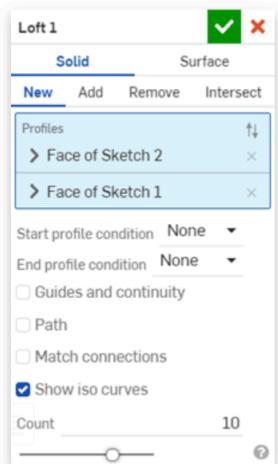
Accomplishments:

Today we gathered resources that will help us create our chicken pot and egg mug. Both will use similar tools (ex. Filet, extrude, revolve). Understanding these components allows us to save time. The less time we spend trying to comprehend the software, the more we can spend actually designing our beverage holders.

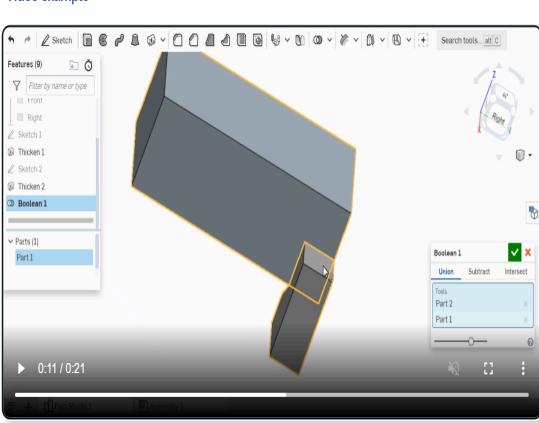
Part Studios > Feature Tools > Loft

### Loft

1. Click .



2. Select Solid Creation type.



## Wednesday March 16, 2022

Today's Goal:

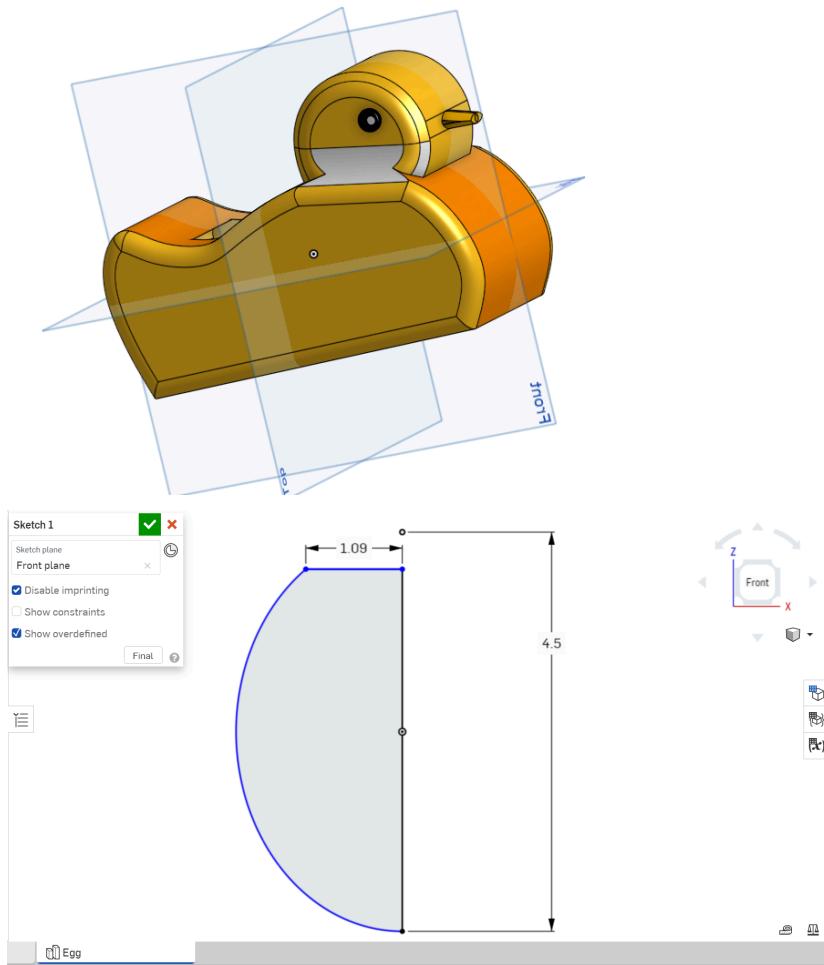
- Start working on 3d design for the hot n cold project

Challenges:

- It was difficult to put a hole in the chicken pot.
- Creating the general shape of the egg was a bit hard. Making it hollow was challenging too. Eventually however, we realized the ellipse tool could be used for the shape and the shell tool could be used to make it hollow.

Accomplishments:

- Finished the base of the chicken by using sketch, extrude and fillet tool.
- Created the sketch that will be used for the egg. It has a height of 4.5 inches and the opening will have a radius of 1.09. We plan to use revolve with the face of sketch #1 as the region to revolve, and sketch #1's edge a revolve axis. This will give us the egg-like shape we're looking for.



## Friday March 18, 2022

Today's Goal:

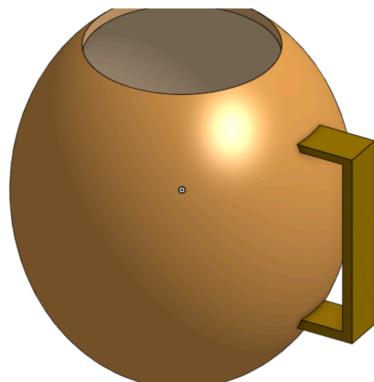
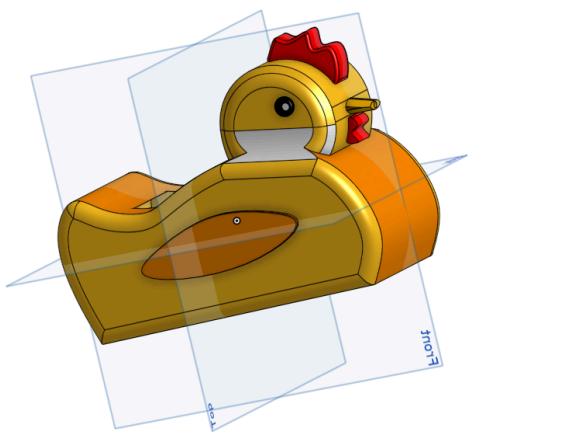
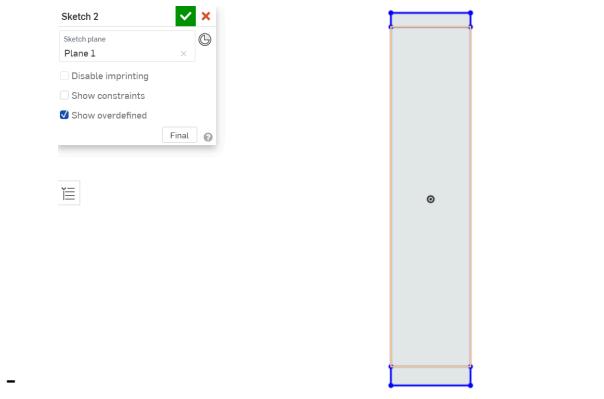
- Continue working on our final designs
- Revolve egg
- Make the egg hollow.
- Create the egg handle

Challenges:

- Creating a lid for the chicken kettle, given its curved opening, was challenging.
- Making an arched handle for the egg seemed impossible. The handle's texture would be visible within the egg itself. Instead, we decided that using a rectangular handle would be the best option.

Accomplishments:

- I added some wings/ handles to my chicken and also added the Wattle and comb.
- Using the revolve and shell tools, we created the egg's general structure. To create its opening, we used extrude:remove.
- Creating the egg's handle required the right plane to be shifted in towards the right by 2.165 inches. On this shifted plane, we used the center and corner rectangle tools to create the general shape of the handle. From there, we extruded each part towards the center, forming the handle.



## Monday March 21, 2022

Today's Goal:

- Finish working on our final designs

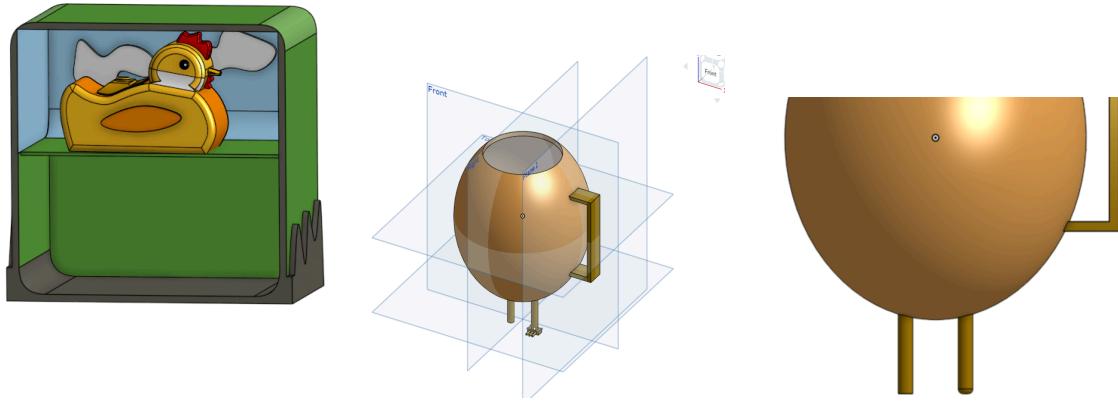
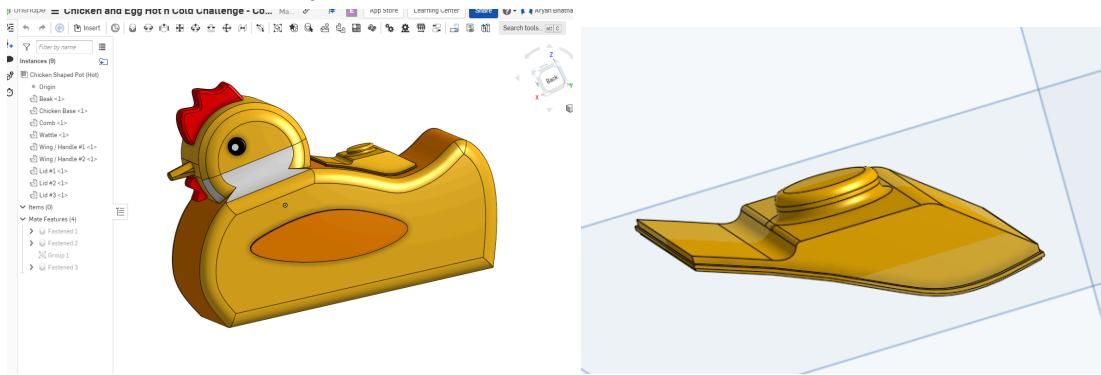
Challenges:

- I had some difficulty coming up with the design for the lid because onshape would not let me sketch on curved objects, so I had to improvise and try to recreate the design on a new document, and because I found a way to accurately take some measurements on my lid hole, I started to create my lid
- Preventing the legs present on the egg from clipping into the hollow inside was another challenge. Eventually this was solved by finding the right distance for the sketch's plane shift.

Accomplishments:

I finished my project and the lid, it is done

- Continuing progress on the egg was the next thing done. By shifting the front and right planes the handles and legs were created. The next step is to create the chicken feet.
- To create the egg's legs, we shifted the top plane downwards by 2.165 inches. On this plane, using the center-point circle tool, we created two evenly spaced circles with diameters of 0.18 each. Then, they were extruded by 1 inch.



## Tuesday March 22, 2022

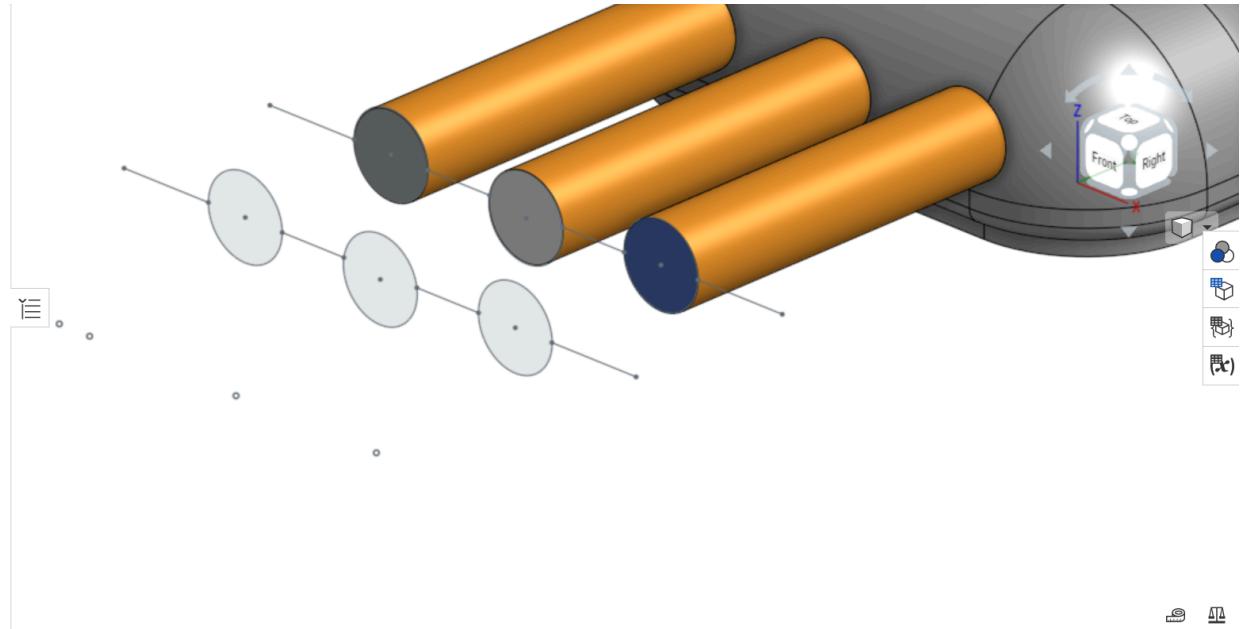
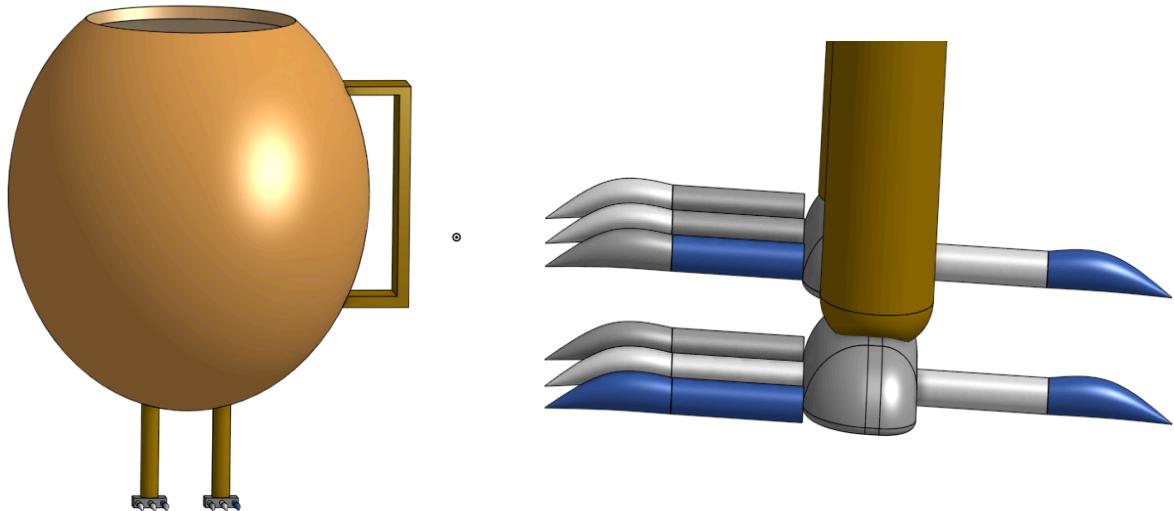
Today's Goal:

- Create Claws for chicken feet (final)
- Move Egg into the box.
- Edit box for chicken and egg.

Challenges:

- Creating the chicken's claws in the assembly tab was time consuming.
- Using the filet tool was hard with the strange shape of the chicken feet.

Accomplishments: We created the chicken's feet today. They use two main parts: the claw, created using loft as well as several plane shifts, as well as the more cylindrical "toes" using circular extrudes. Loft was also used to give the claws a more realistic look. An extra claw was added to the back of the chicken's feet to make it more realistic. Each part was attached in an assembly tab using the fasten tool.



## Thursday March 24, 2022

Today's Goal:

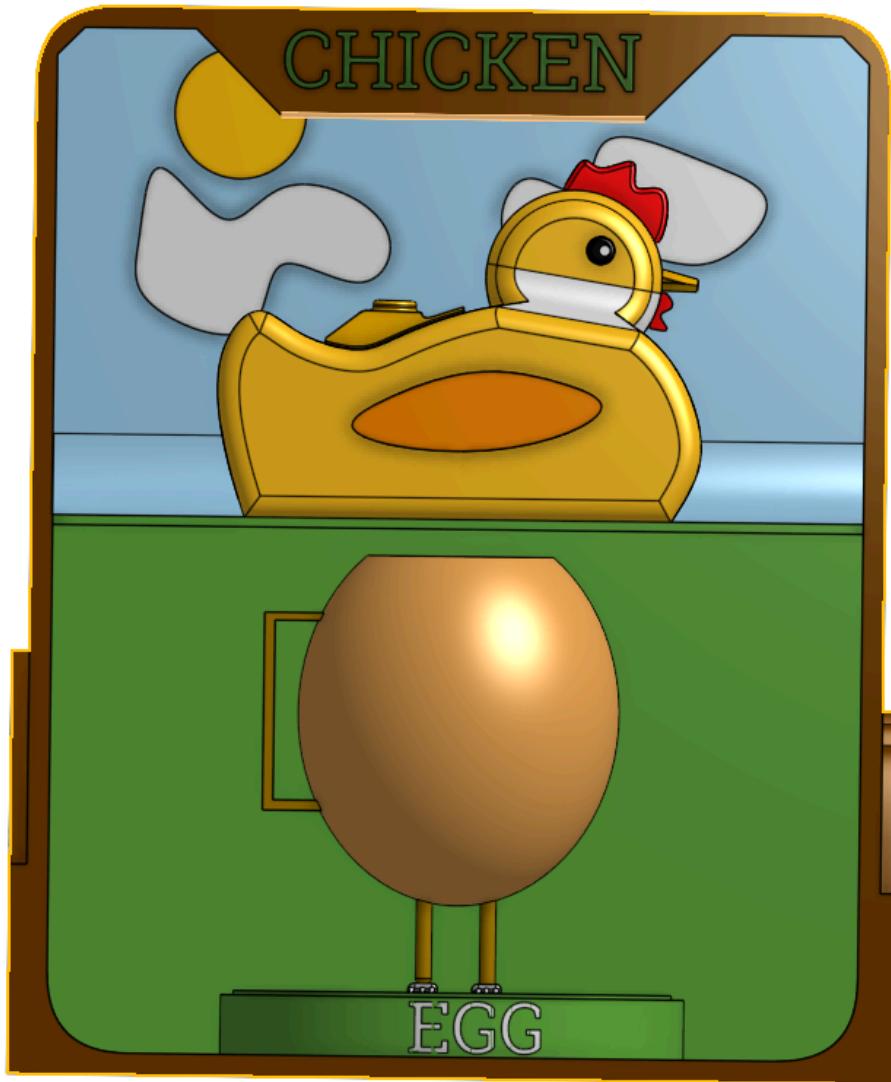
- Finish Project
- Place Egg in Box
- Change Color scheme of egg feet

Challenges:

- We could not build both the chicken and egg in the same document. We needed to import the egg once finished.
- There were also errors with the chicken's feet and the fastened tool. We eventually solved it by removing, and reading them.

Accomplishments: We finished our project today by placing our beverage holders in a box. The egg needed to be turned around 180 degrees, becoming a left-handed mug, so the claws would be front-facing

[Document with egg](#)



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## Wednesday March 30, 2022

Goal(s):

- Consider feedback to complete redesigns/

Challenges:

- I was trying to create a removable handle for my chicken and for some reason I could not use the loft tool so I had to work around that
- Creating an arched handle was hard because of the evolved surface of the egg. Instead of

Accomplishments:

I created a handle for the chicken and the best part is that it is removable, so when you want to pour a hot drink into a cup, you can put the handle I created into it and it is fully removable

