



Plastic Animal Project

The Process

Objective: Create an endangered animal out of reclaimed plastic.

**This is Barry
the Roseate
Tern.**

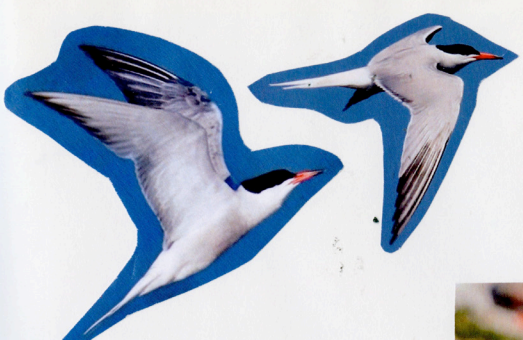






SKETCHBOOK



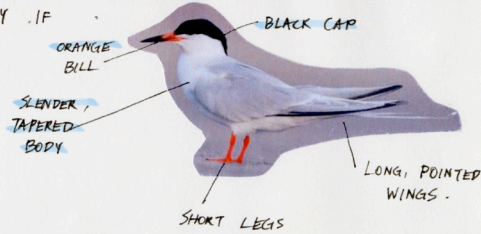
ROSEATE TERN — RESEARCH.



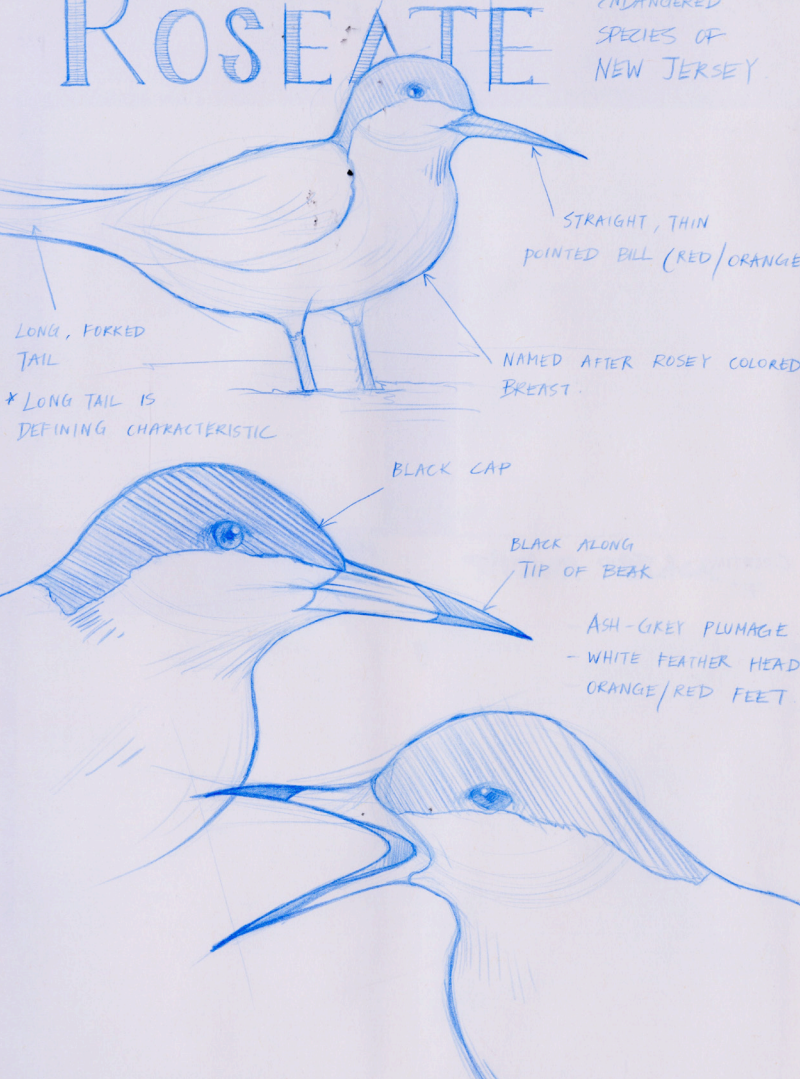
DIVES RAPIDLY ON PREY FROM FLIGHT BY PLUNGING INTO WATER
EAT AMERICAN SANDLACE, ANCHOVIES, HERRING, MACKERAL, BLUEFISH, BUTTERFISH → SMALL FISH
NESTS ON ISLAND BEACHES OF SAND, PEBBLES, OR SHELLS
SANDY BARRIER ISLANDS, ROCKY ISLANDS, OR HUMMOCKS IN SALT MARSHES
VERY LIGHT, BUOYANT FLIGHT W/ FAST & SHALLOW WINGBEATS
MUSICAL CALLNOTE IN FLIGHT
HIGHLY SENSITIVE TO DISTURBANCES & WILL DESERT WHOLE COLONY IF FEEL THREATENED

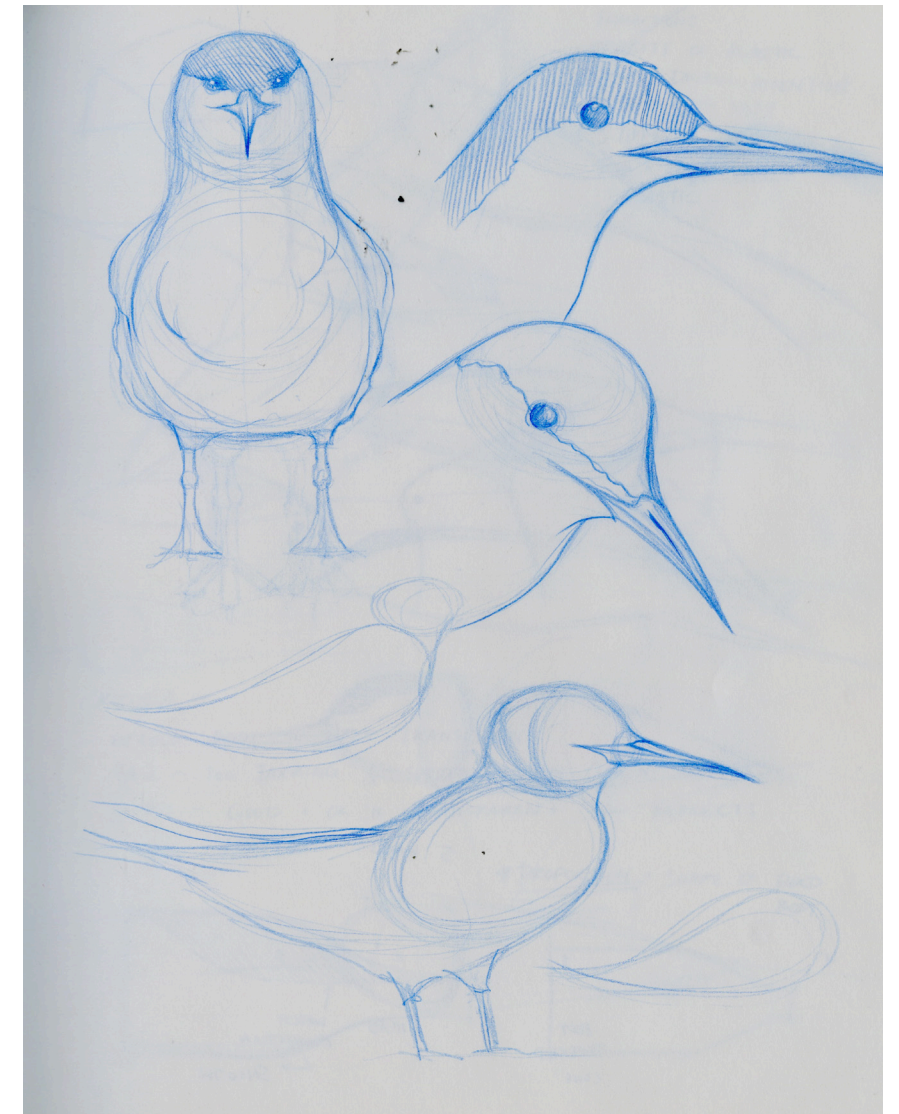
MAYBE INCLUDE COLOR? ↓ BEAK, FEET



ROSEATE ENDANGERED SPECIES OF NEW JERSEY



LONG, FORKED TAIL
* LONG TAIL IS DEFINING CHARACTERISTIC
BLACK CAP
BLACK ALONG TIP OF BEAK
ASH-GREY PLUMAGE - WHITE FEATHER HEAD - ORANGE/RED FEET



SKETCHING

After doing research on the background information of the roseate tern, I began sketching the form. I took note of its smooth, tapered shape when flying, its distinct black cap, and red, pointed beak.

SKETCHING cont.

As I was sketching, I referred to the story I wrote to make sure I captured all of the roseate tern's characteristics. Below is an excerpt from the story.

Beating our wings, we leave the dense vegetation of our estuary and soar above the ocean, searching for a glimmer of scales of a school of small fish approaching the ocean shallows.

Suddenly, Barry gives out a callnote, and I see the subtle glisten of a school of sandlace.

“Not sandlace again,” I complain.

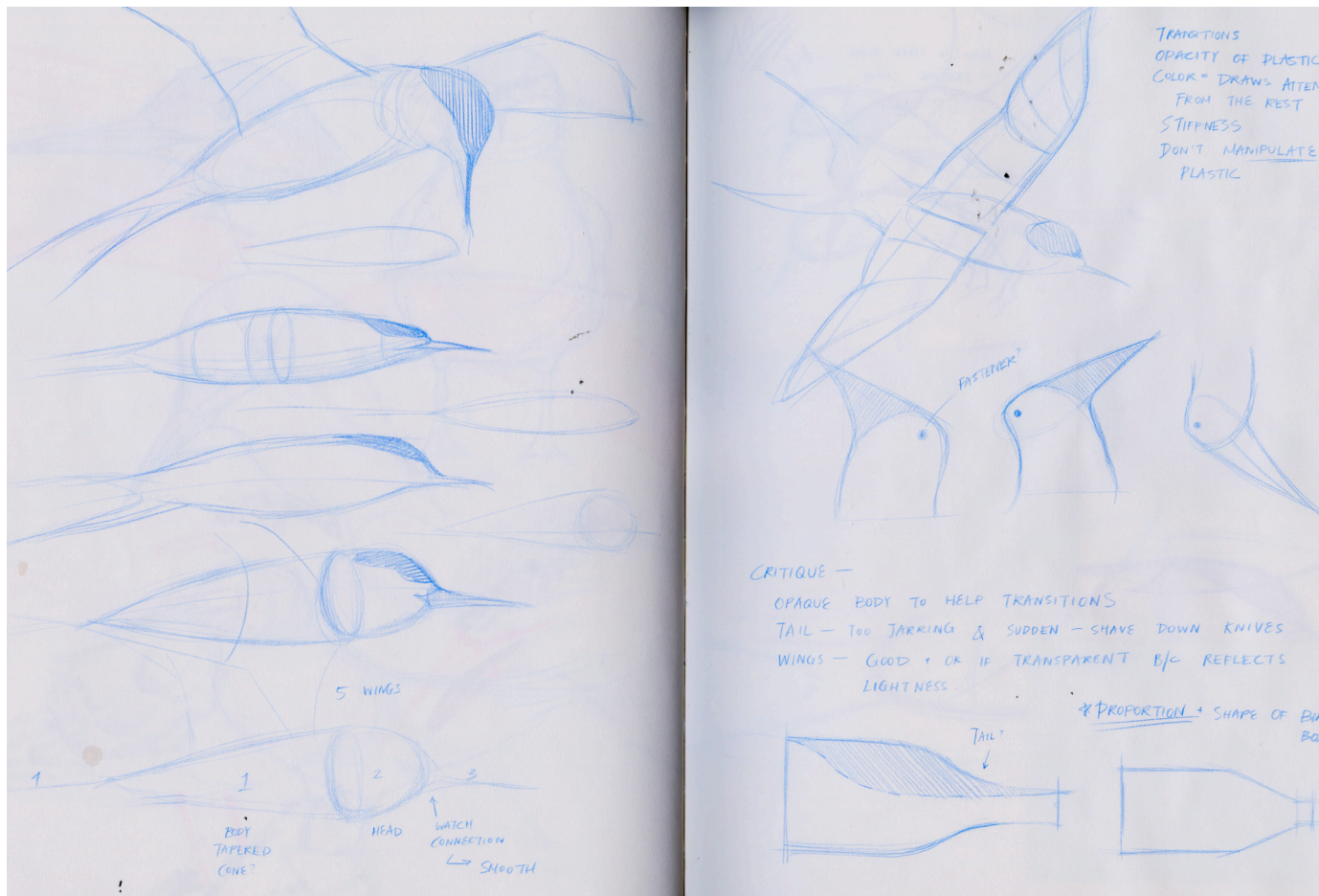
“Just eat it, unless you wanna steal from the common terns again,” Barry says as he dives into the ocean. Reluctantly, I plunge into the chilling water, tasting the juice from the sandlace as I squeeze it between my beak. Returning to our nest, I spot a curious cluster of animals walking on two legs, wrapped in vibrant, thin furs with a thick mane atop their heads.

“What’s that?” I point with my beak to the cluster.

“Humans. We’ll have to move nests again. You know the colony policy—desert when there’s even the slightest signal of a threat,” Barry says with his sandlace still clamped between his beak.

“Again? This is the fifth time we’ve moved,” I mumble as we land among the thick vegetation of our estuary.



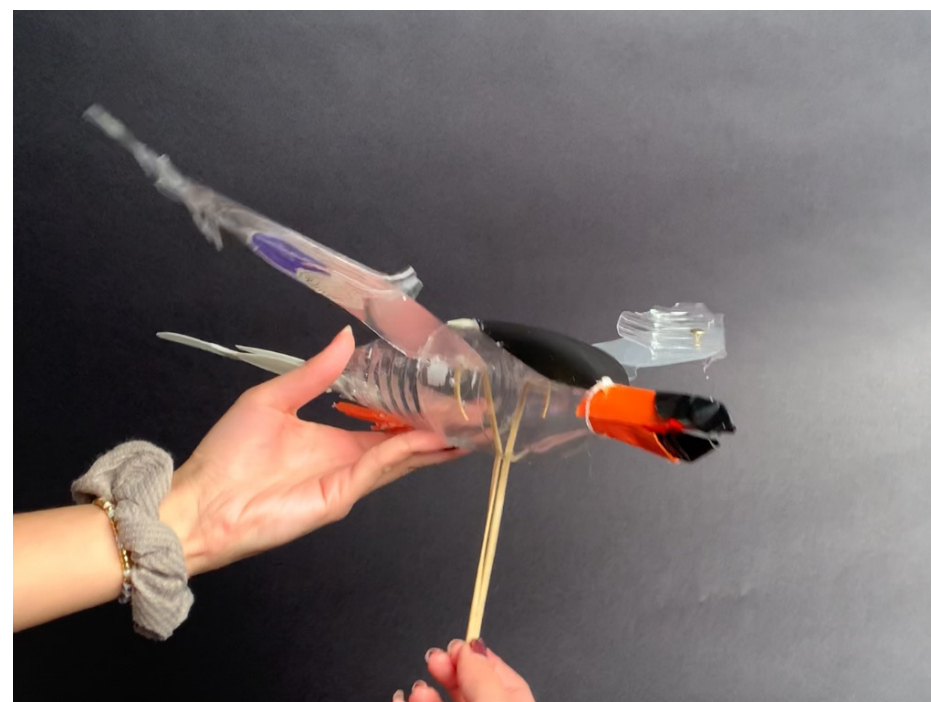
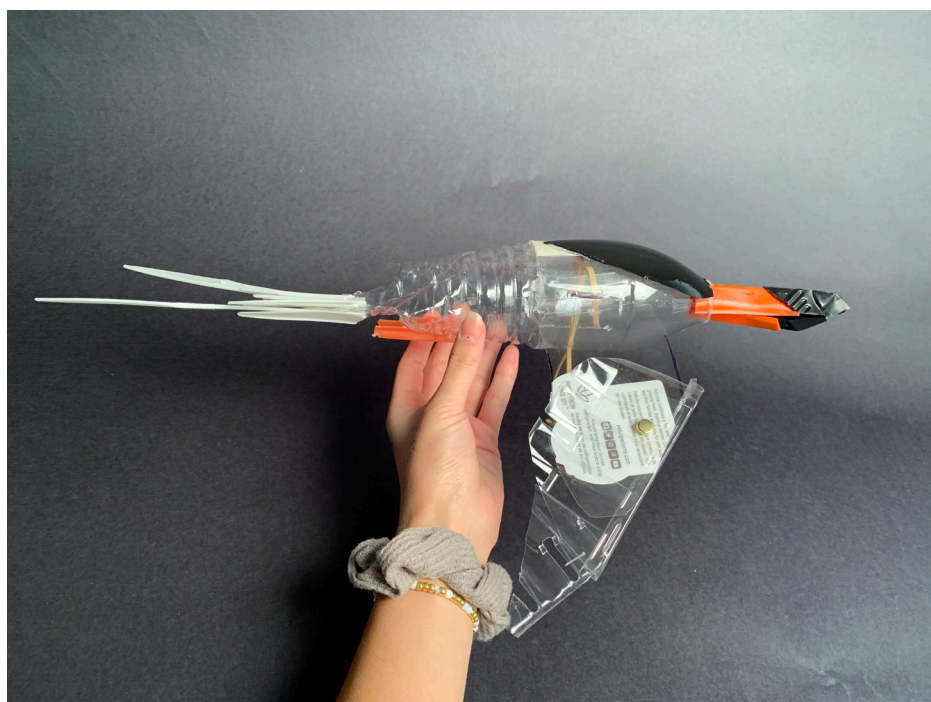


ITERATION 1

WATER BOTTLE BARRY

For my first iteration, I primarily used plastic water bottles because they were easily accessible and abundant across campus. In my sketchbook, I dissected the form of the body by drawing a tapered, ovular shape.

I then tested out different body shapes with three water bottles by flattening, folding, and glueing the ends. I finally attached Barry's accessories—his beak (TidePod container), his cap (black container), tail feathers (plastic knives), and feet.



ITERATION I

My Interaction: THE WINGS

I created a rubber band mechanism that flaps the wings when pulled. This mechanism, however, is quite dependent on creating “flat” wings—I may decide to create more 3D wings in future iterations.

Critique & Reflection

1. Barry looks like he doesn't have a neck because the body and head are created from one form. Maybe attempt different forms for the head and body to distinguish the separation.
2. The knives for tails feathers are quite jarring; the transition from the body to the tail isn't smooth. This may be resolved if I use opaque plastic for the next iteration.
3. Pay attention to the proportions of the bird. He appears 'cartoonish' because the beak is too wide and long, and the head is too big.

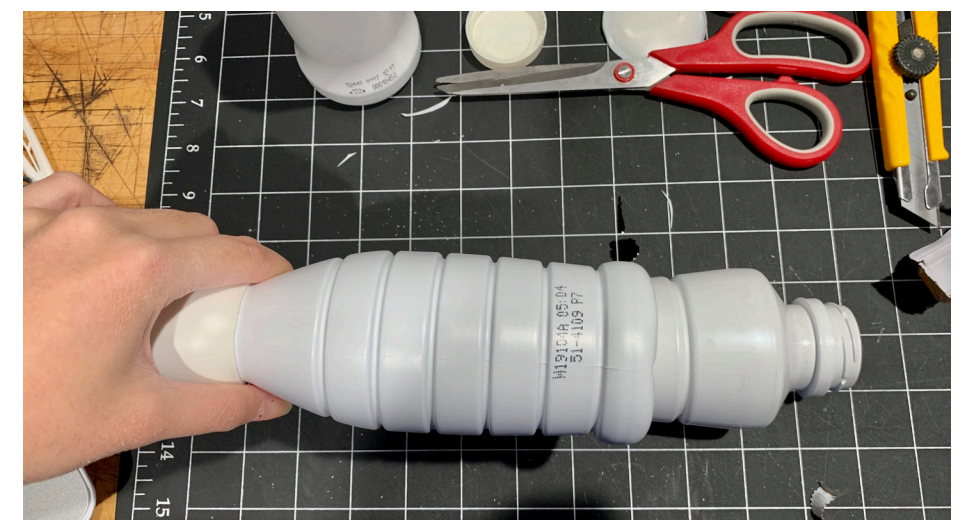
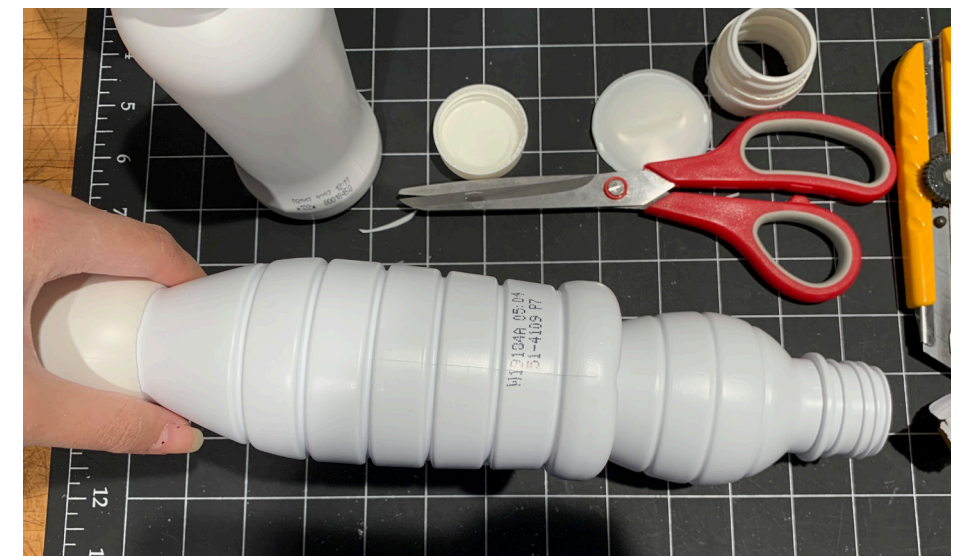
Opaque white bottles from SlimFast, Lean & Shake, Super Coffee Mocha, Muscle Milk, and Starbucks Iced Latte.

ITERATION II

TORPEDO BARRY

At Construction Junction and Creative Reuse, I found multiple opaque white plastic bottles for the head and body of Barry. I decided to use the SlimFast bottle for the body, and the Muscle Milk bottle for the head.

My goal was to accurately create the tapered shape of the body that is so characteristic of the roseate tern.





ITERATION II

Materials

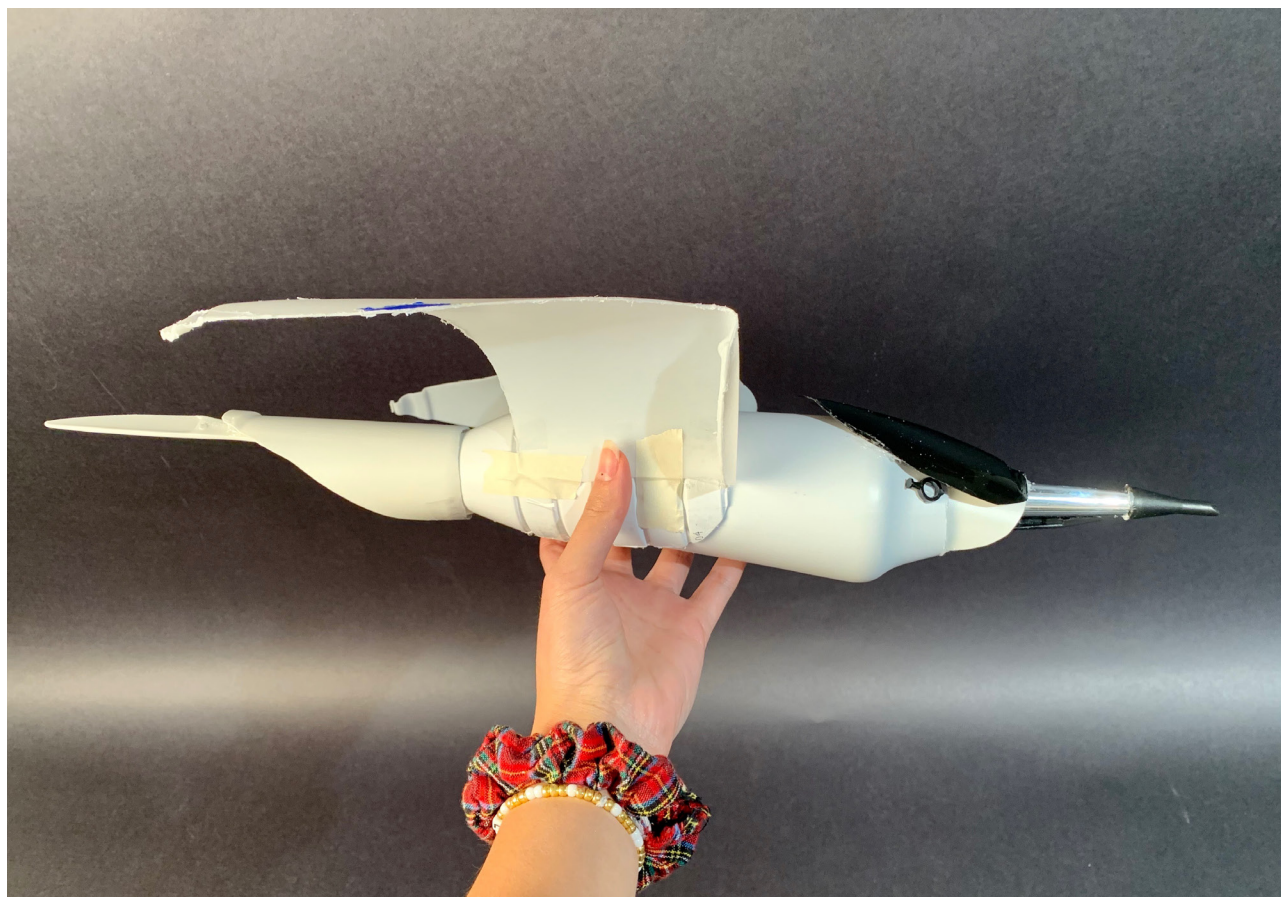
Head: Starbucks Iced Latte bottle

Body: SlimFast bottle

Tail: Chobani bottle, plastic knives

Beak: Tweezers, Balloon Pump tip, reflective plastic piece

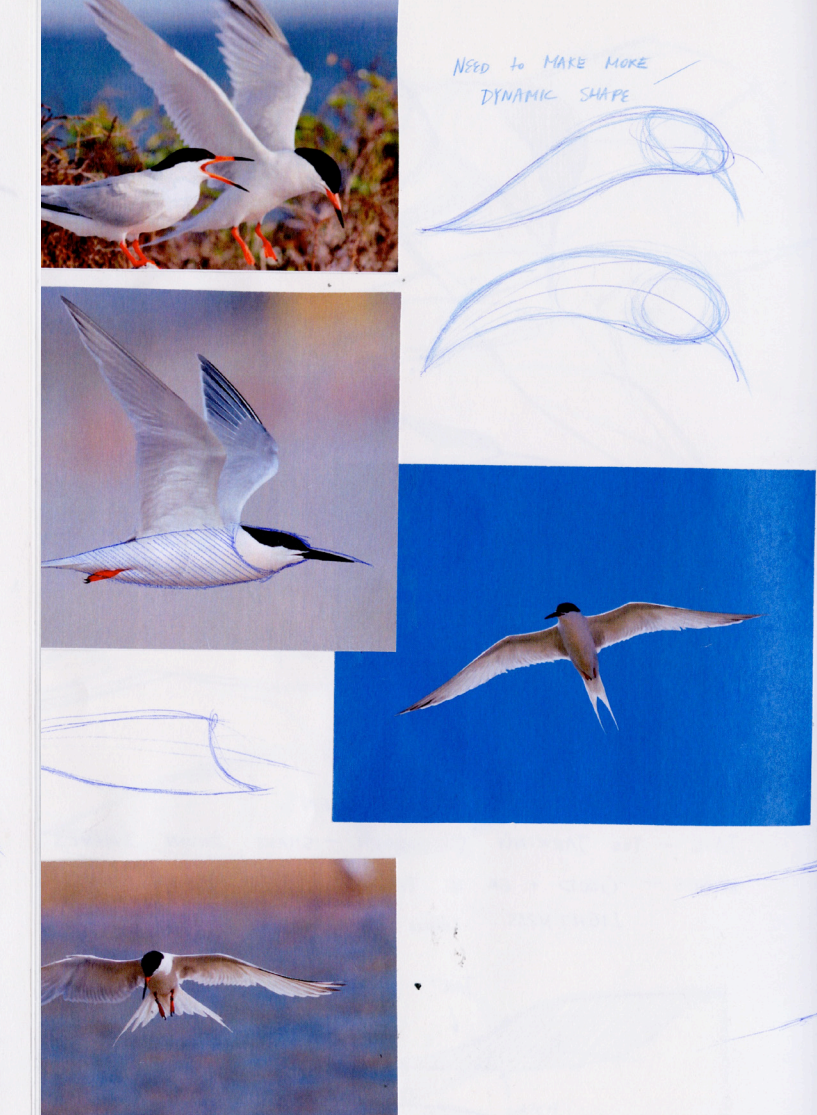
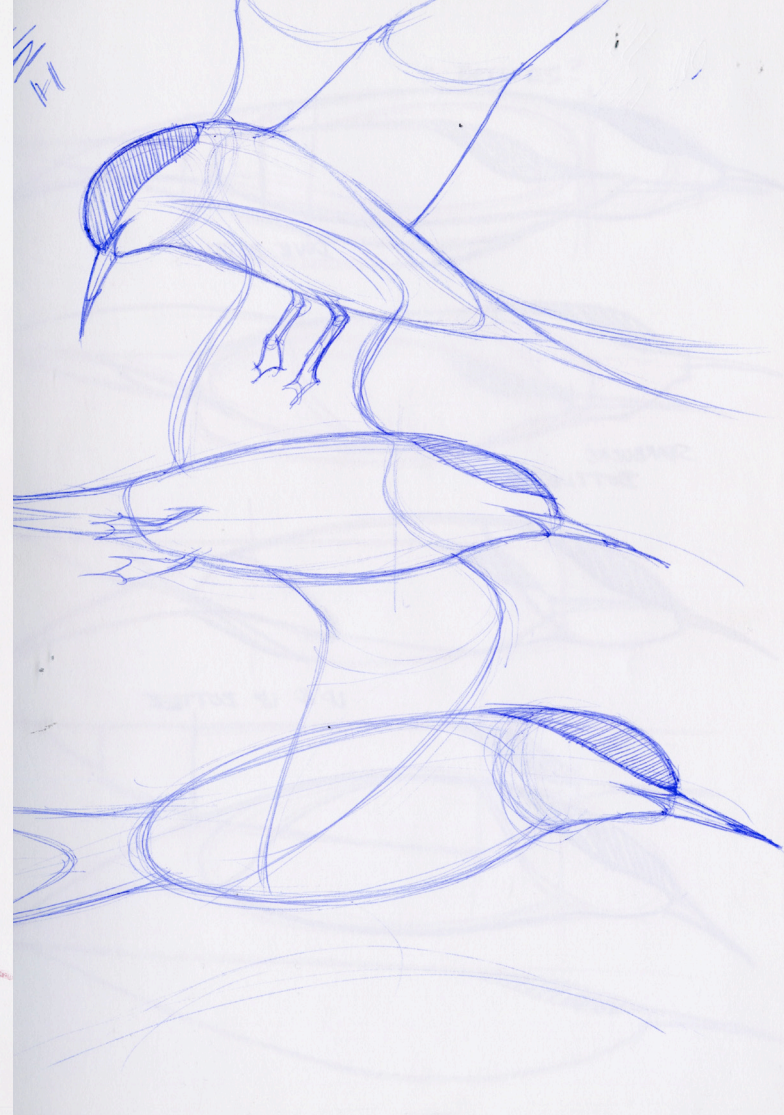
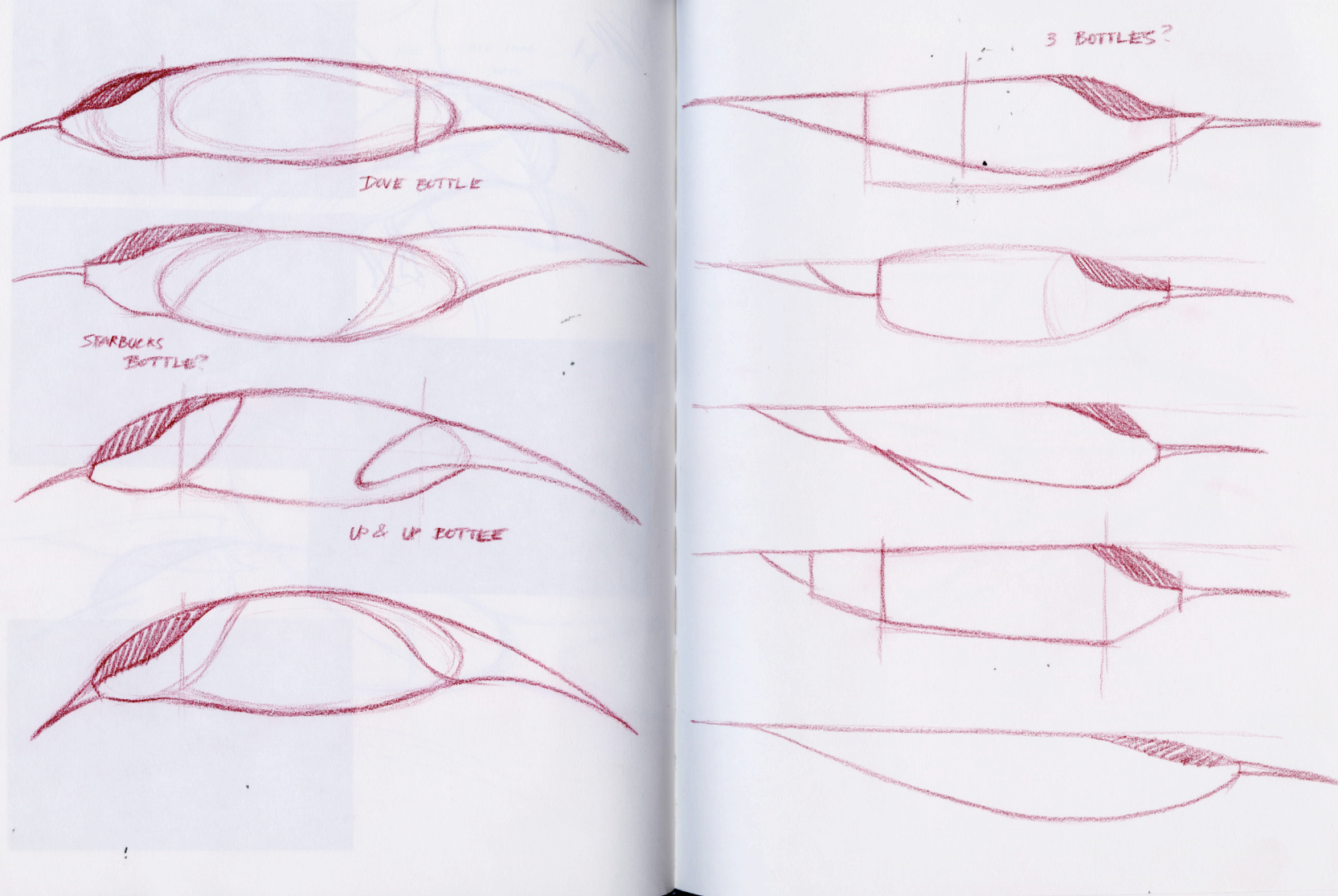
Wings: Chlorox Wipes container



Critique & Reflection

1. I wasn't proud of this iteration because the segments of the bird were very disjointed. The body of the roseate tern should be simple and smooth, not segmented.

2. Barry lacks a lot of volume in this iteration—he looks like a torpedo. The body is too straight and stiff. Consider adding curves to the form for volume and movement. Instead of sticking bottles together, I may try to look for shampoo or soap bottles that naturally have more volume to the form.



ITERATION III

Sketching

In the second iteration, I didn't capture the form of the bird accurately. Therefore, before beginning my final iteration, I wanted to study the shape of the bird again in my sketchbook.



ITERATION III

Materials

Head: Tapered white bottle

Body: Up & Up Shampoo Bottle

Tail: Chlorox Wipes Bottle

Beak: Tide Pod Container



Instead of stacking plastic bottles together, I decided to use a shampoo bottle for the body. I was between a Dove shampoo bottle and an Up & Up shampoo bottle. I ultimately selected the latter because of its whiter color.



ITERATION III

Making Barry's Tail

In my previous iterations, I created Barry's tail with multiple materials that made it look disjointed. For this iteration, instead of using the plastic knives, I created the tail with one piece of plastic from a Chlorox wipe container. This created a smoother transition from the body to the tail.



ITERATION III

Making Barry's Wings

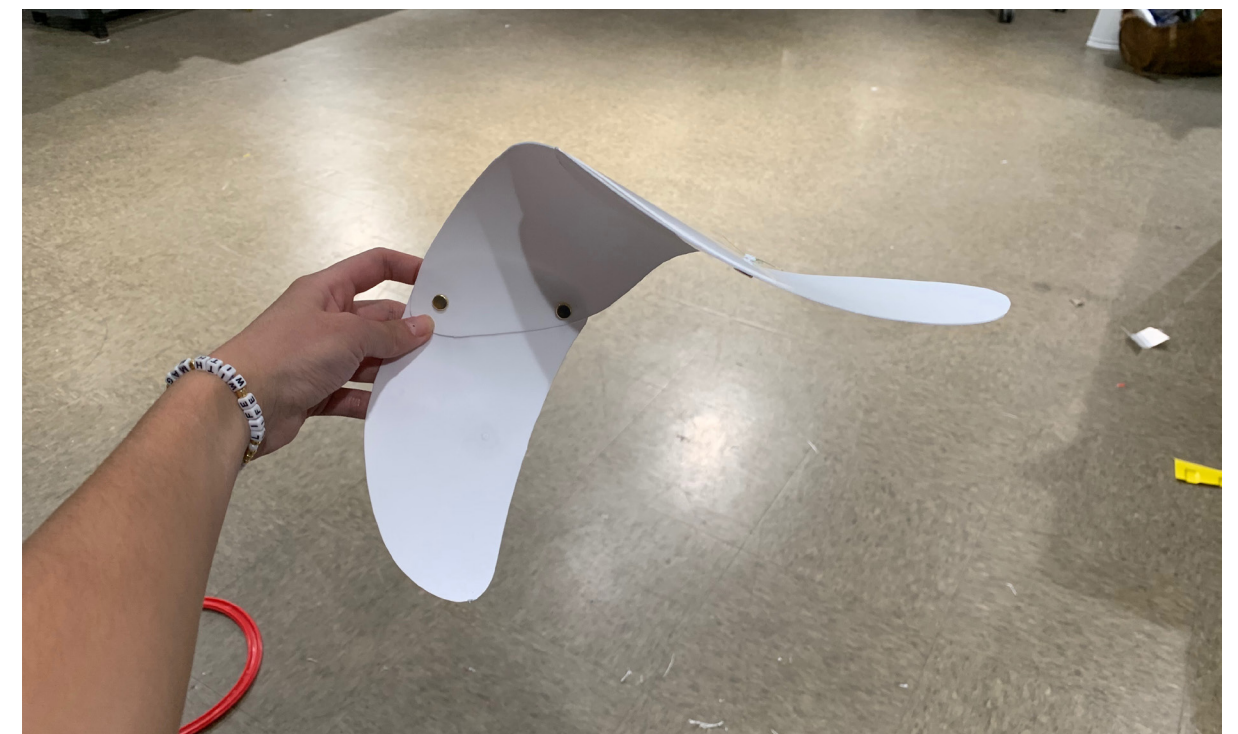
I didn't want the wings to appear static and dense like the previous iteration. My selection of plastics, however, consisted of milk and bleach jugs that I thought could imitate the curves and fluidity of the wings. Instead, Barry just looked like an insect with oddly small, ovular wings.



ITERATION III

Making Barry's Wings

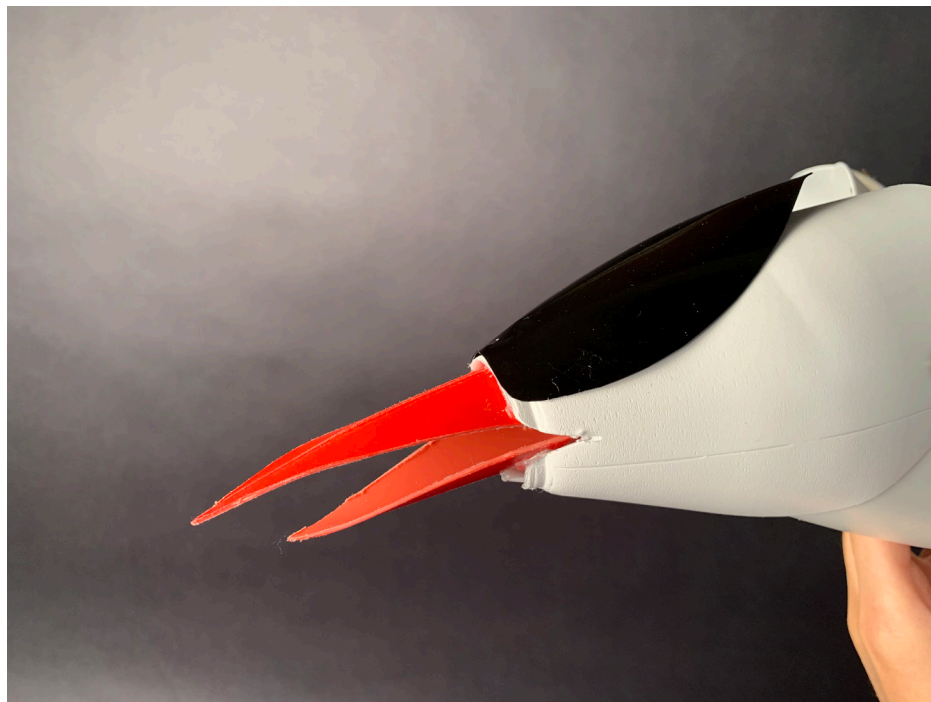
At Creative Reuse, I found these plastic white pails. The plastic was flexible enough to “flap” like wings, and the curve of the pail gave the wings depth and volume when layered.





ITERATION III

Barry's Final Form ... almost



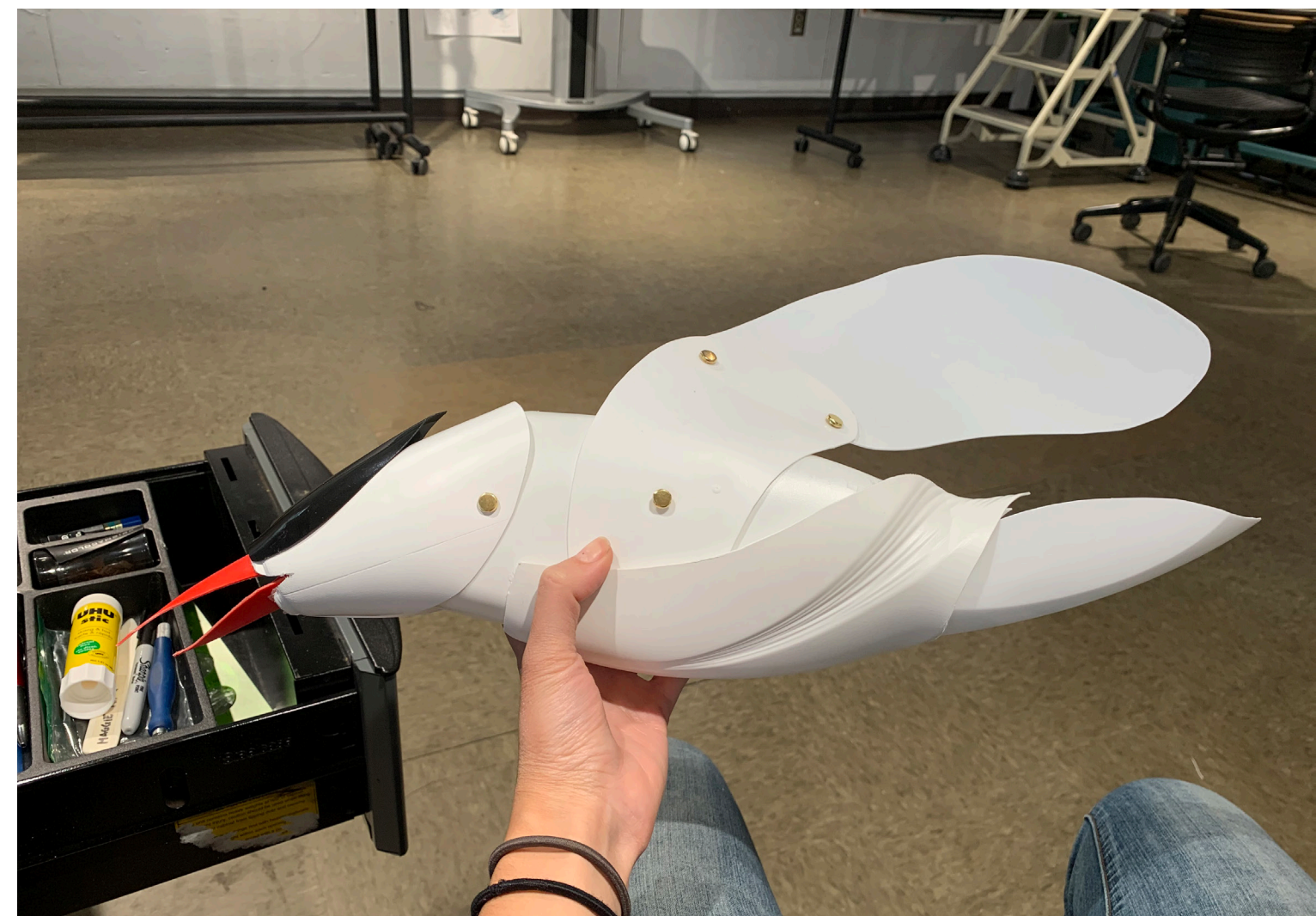
I couldn't choose between two options for the tail. I ultimately chose the bottom image because it creates a more smooth transition from the body.

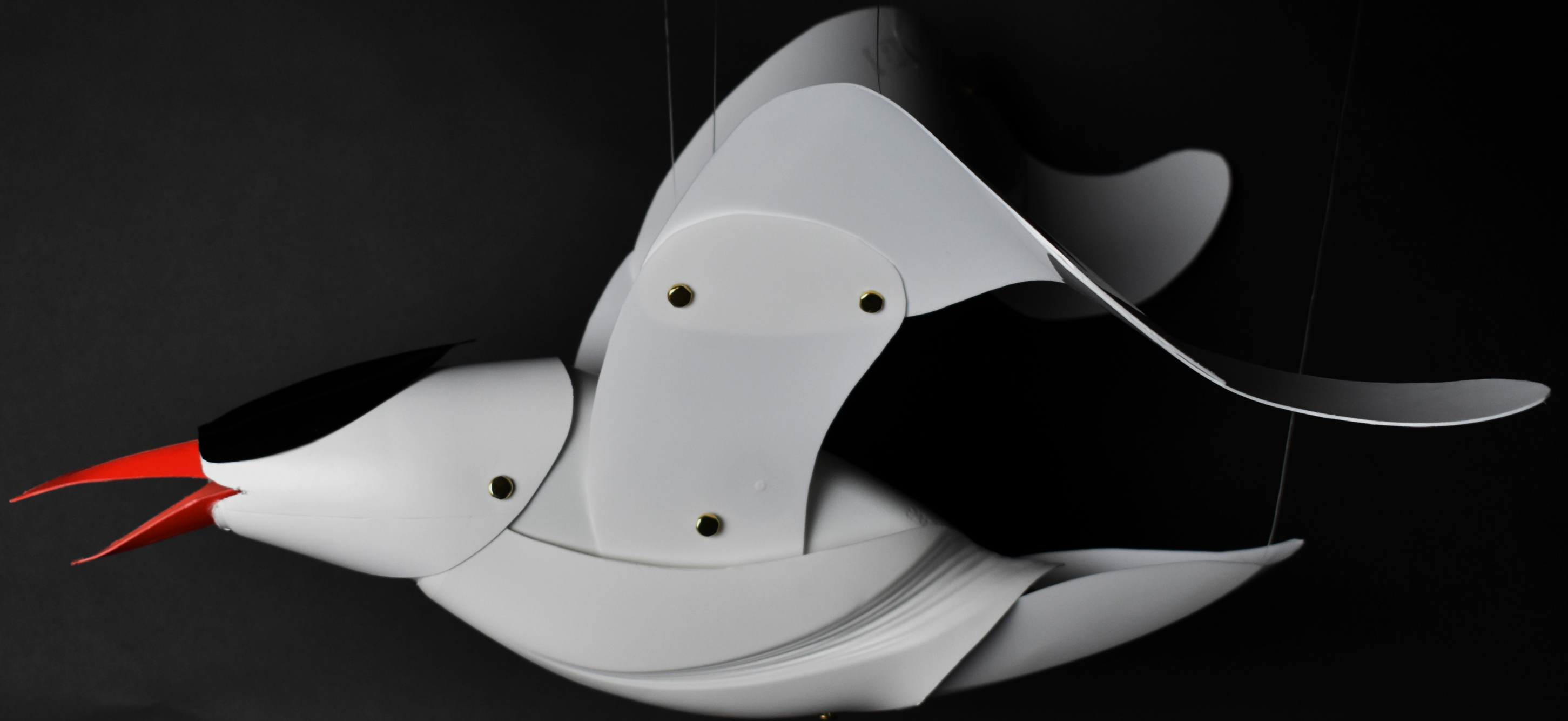


Reflecting on Iteration III

Although the third iteration was an improvement from the first two iterations, I still wasn't completely content with the form. Barry had a lot more volume to his chest and underbelly, however, I wasn't happy with the tail and wings.

I had one Downy Softener container and two plastic white pails left. I decided to make some slight alterations to my third iteration to create the final form.

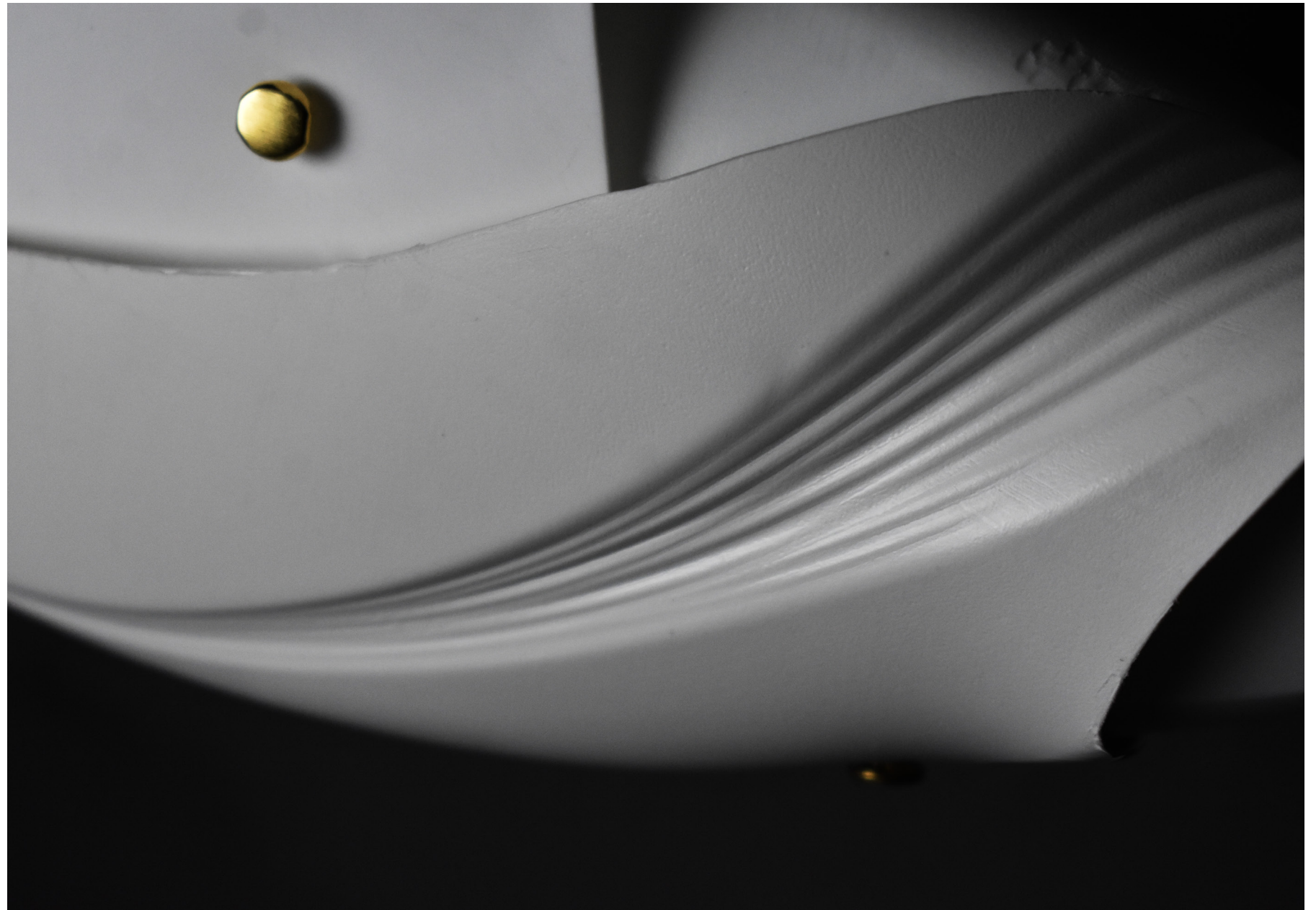






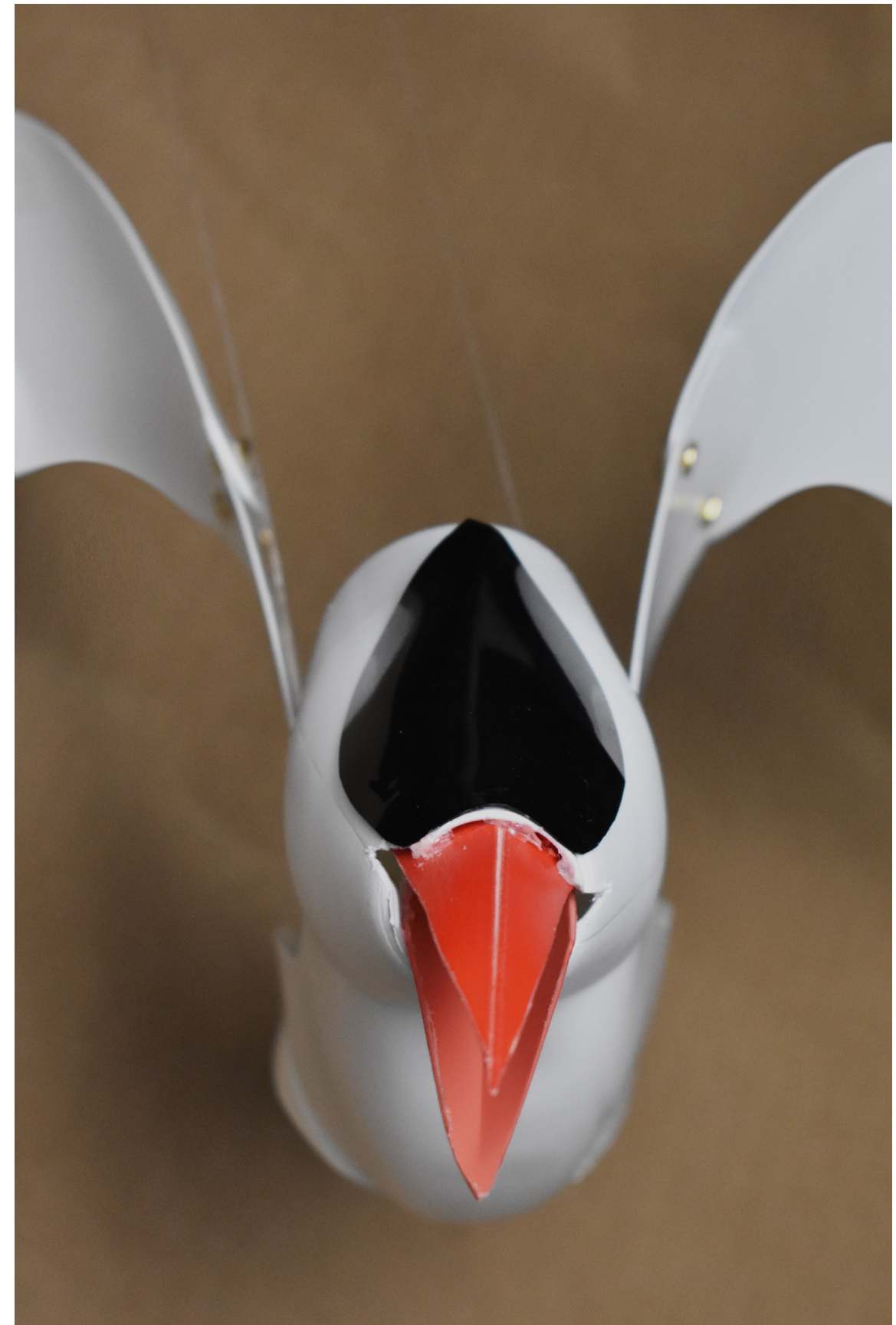


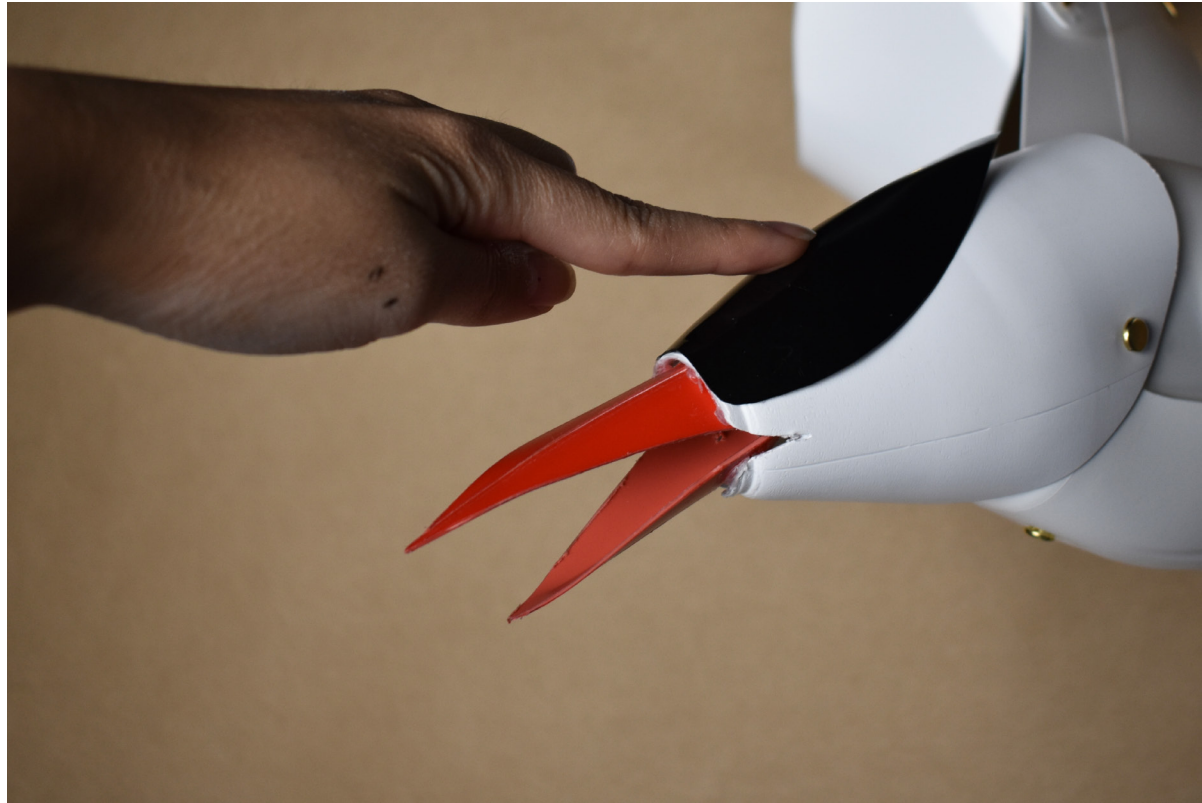
Closeup Shots



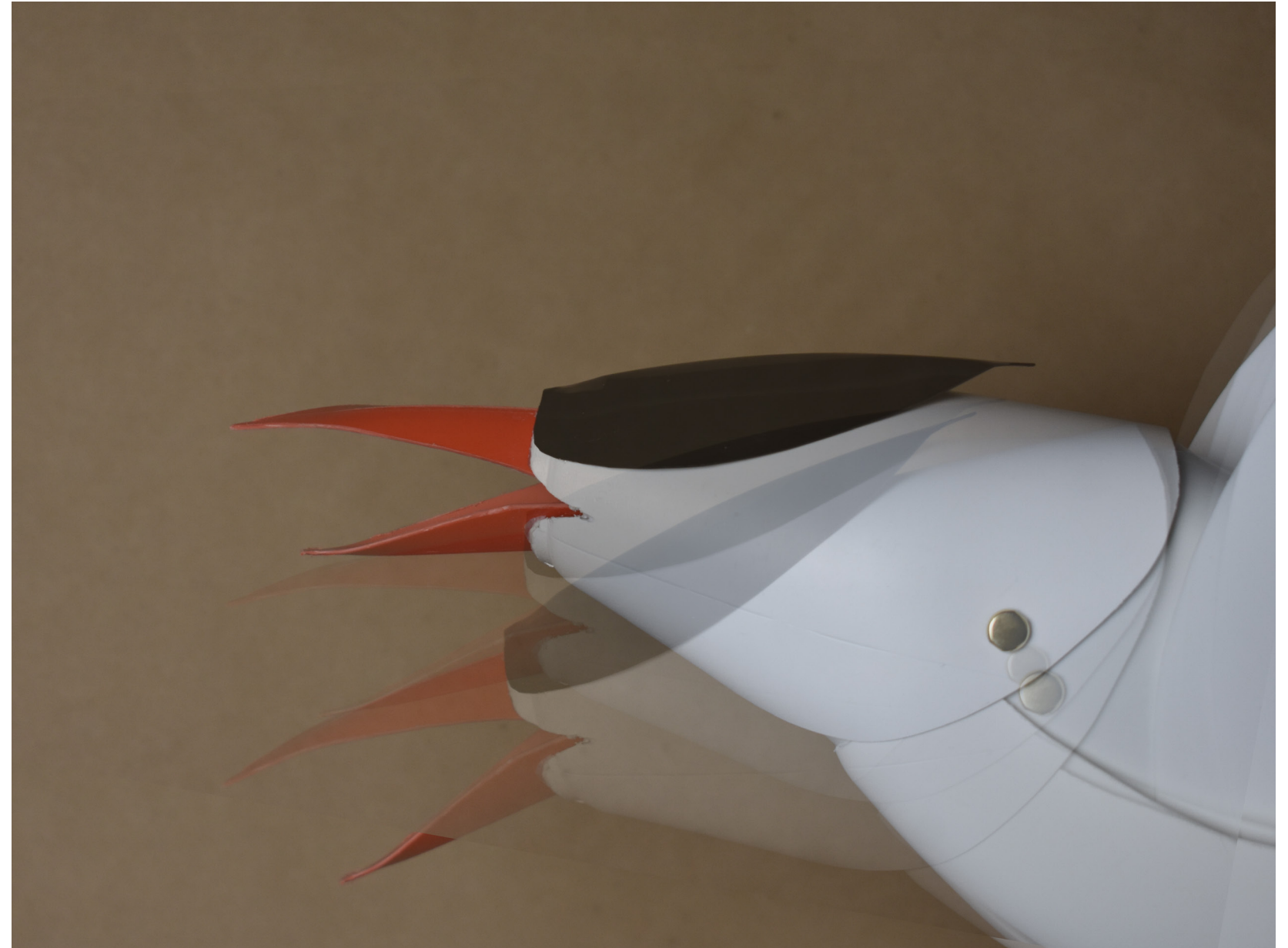


Front View





**The Interaction: Head dips
up and down**



REFLECTION

Throughout this project, I was able to represent and construct the roseate tern by observing the pre-existing curves and forms of disposed plastic packaging. This project was pretty difficult—I especially found it challenging to create the smooth, tapered shape of the bird, along with the wings.

I learned that sketching the forms of the bird was especially helpful in beginning to dissect the shapes to understand the animal's basic geometry. Nevertheless, I also couldn't get too caught up in sketching—I had to balance both prototyping and drawing.

I also learned that creating a simple form with less pieces can be more difficult than using multiple pieces of plastic. Using less elements enabled a more sleek and crisp shape. Nevertheless, I couldn't simplify the form so that the roseate tern loses its defining characteristics and qualities—I had to find a balance between abstraction and realism.

