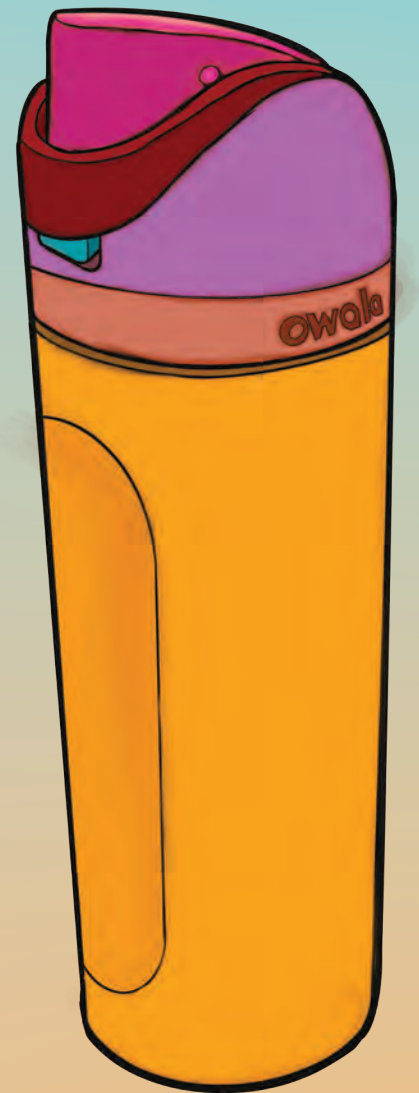


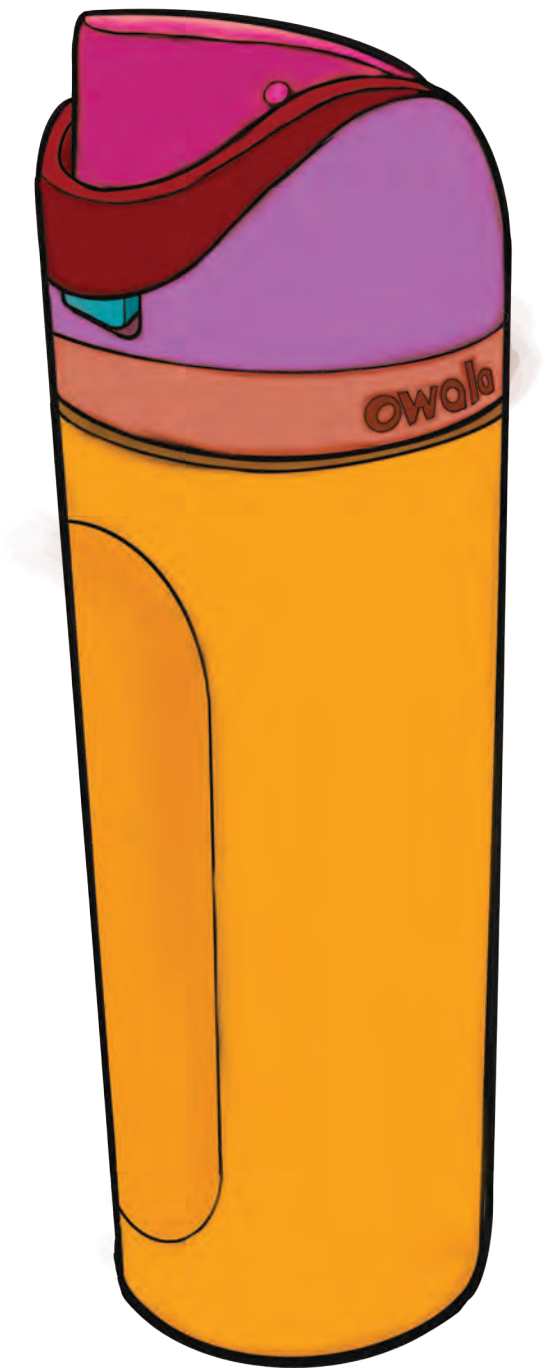


Product Line Extension

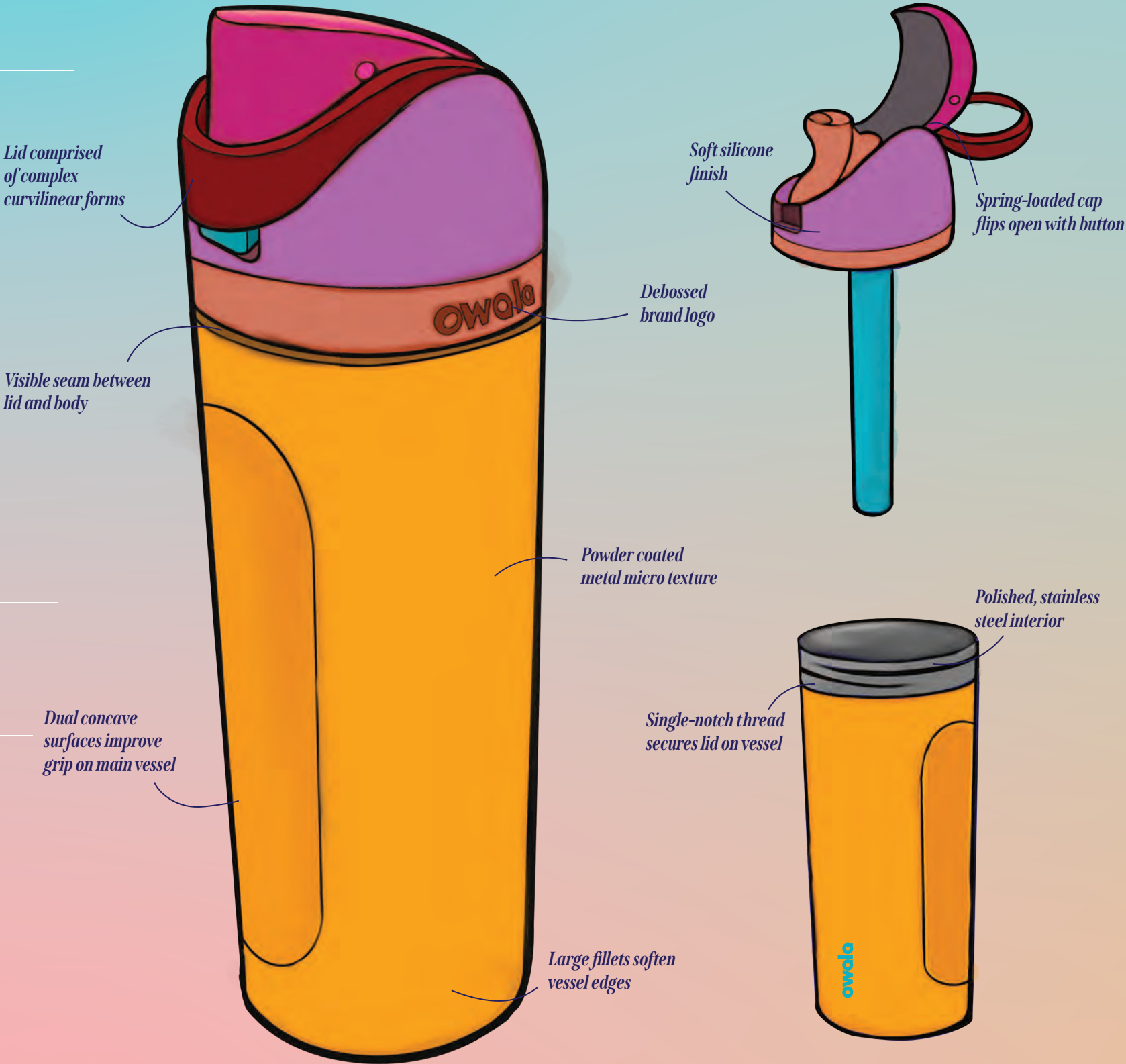
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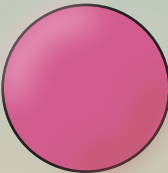
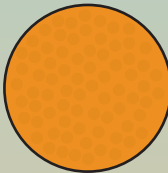
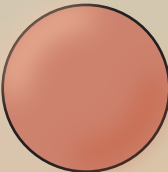
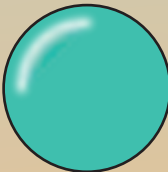
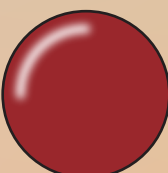
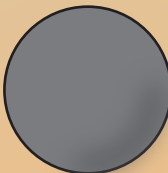
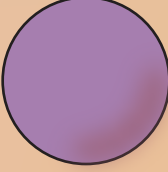
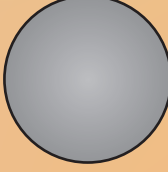


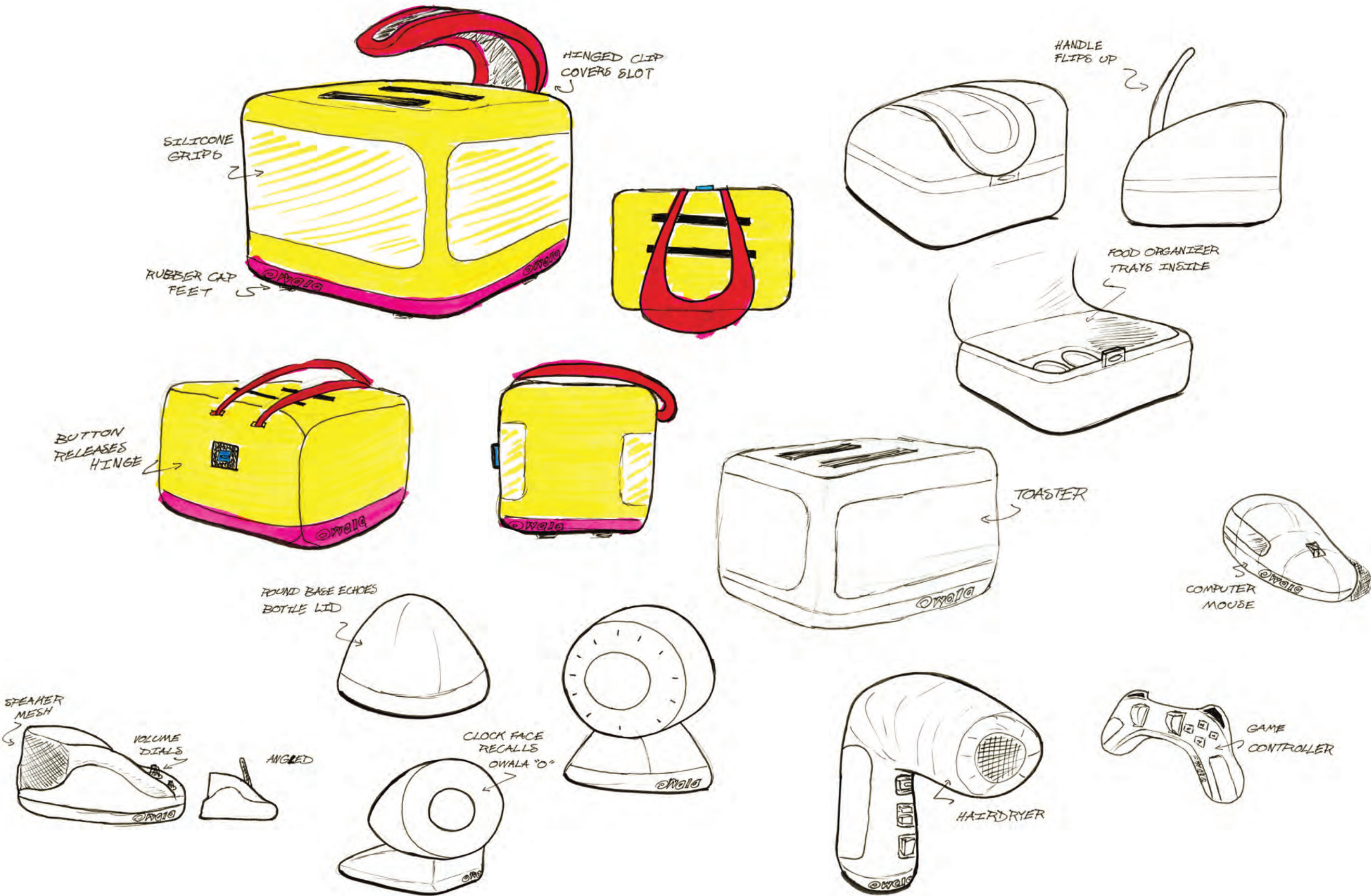


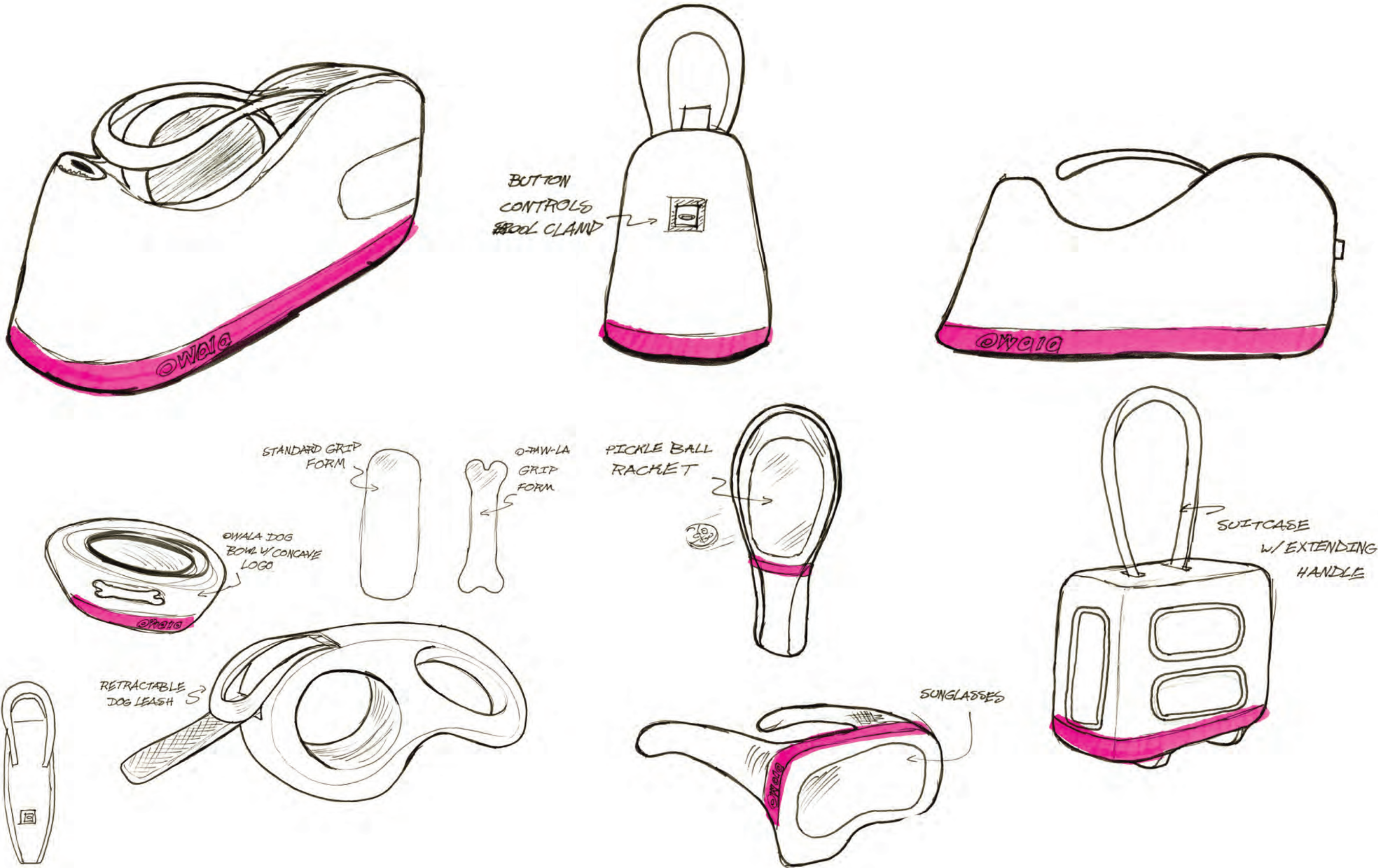


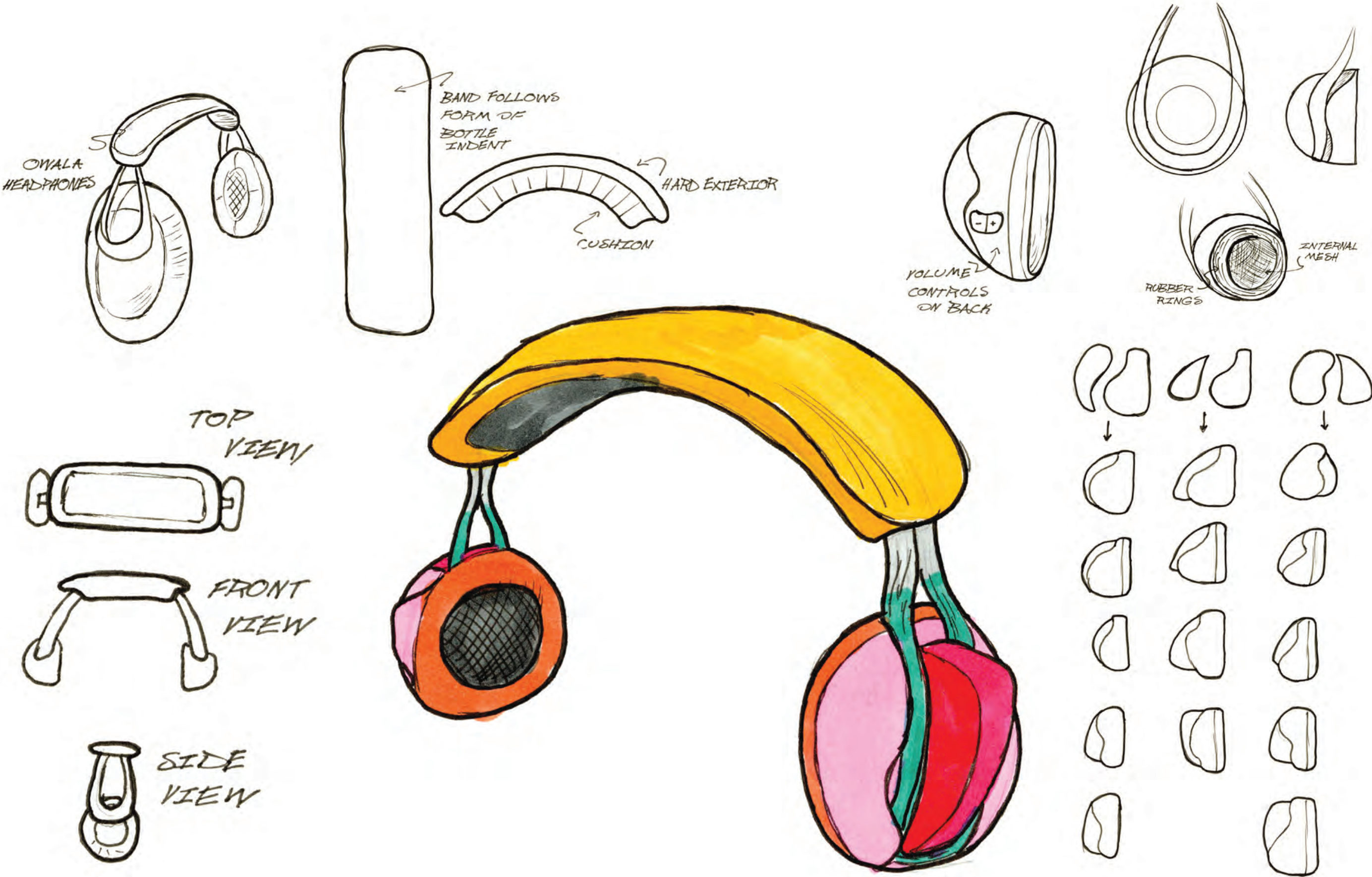
The cumulative effect of the various curvilinear forms and extensive use of fillets throughout the owala FreeSip is an overall softness that invites use and suggests familiarity.

The stepped, inset orientation of the handle, cap, and button echoes the movement of a blooming flower and reinforces the organic feeling of the form. The brand aesthetic, conveyed through color, form, texture, and verbiage, likely aims to appeal to a younger demographic.

	Hard, smooth matte pink plastic		Powder coated matte yellow metal
	Hard, smooth matte salmon plastic		Hard, smooth semi-gloss teal plastic
	Hard, smooth semi-gloss maroon plastic		Soft, rubberized gray silicone
	Soft, silicone purple plastic		Smooth stainless steel









I began my low fidelity model development with a focus on the overhead band of the headphones, since the form of this component is vital to the product's overall aesthetic alignment with the Owala brand. I experimented with bending cardboard along multiple axes in order to create the intended curve effect before tracing out the form of the Owala concave grip. This grip served as the profile for my cardboard prototype, and while several peers enjoyed the form of the piece, they noted that it felt excessively large on their heads.

With this feedback in mind, I began developing a second series of low fidelity headband models out of XPS foam. For this second round, I created a scaled template to translate the profile onto a smaller flat piece to better understand the shape before creating yet another model, this time with curvature along the major axis.



In addition to iterating on the form of the headband, I spent a considerable amount of time developing the form of the ear muff component. This piece is especially important since it remains prominent in the design and incorporates various iconography from Owala's products.

After settling on an orthographic form for the muffs, I cut out a series of paper templates to reference during my model development. From there, I created a scale-accurate cardboard model.

After some amount of testing, feedback from various peers confirmed my own perception that the forms protruded too far from the wearer's head, leading me to develop a second low fidelity concept (pictured on the right) out of XPS foam, which retained the curved aesthetic of the Owala brand while decreasing the extent of protrusion.





My first low fidelity headphone model received decent feedback from peer users who enjoyed the general form of the model. However, there arose a resounding sentiment that the profile protruded too far from the user's head in a lateral direction. Taking this feedback into account, I revisited my model and marked off a section of its height to be removed.

With confirmed enthusiasm for the overall form of the design, I was able to move forward into detailing the model and fitting it to the aesthetic of the Owala brand, as was explored in my second low fidelity model pictured below.



My second low fidelity model aimed to address concerns about the scale of the form and improve detail to help me visualize the design in 3D. This XPS foam model successfully accomplished the desired reduction in lateral scale and enabled me to experiment with tackling complex, curvilinear forms.

For this second model, I incorporated details reminiscent of the Owala Freesip's lid surfaces and experimented with an ellipsoid profile to fit over the wearer's ear.

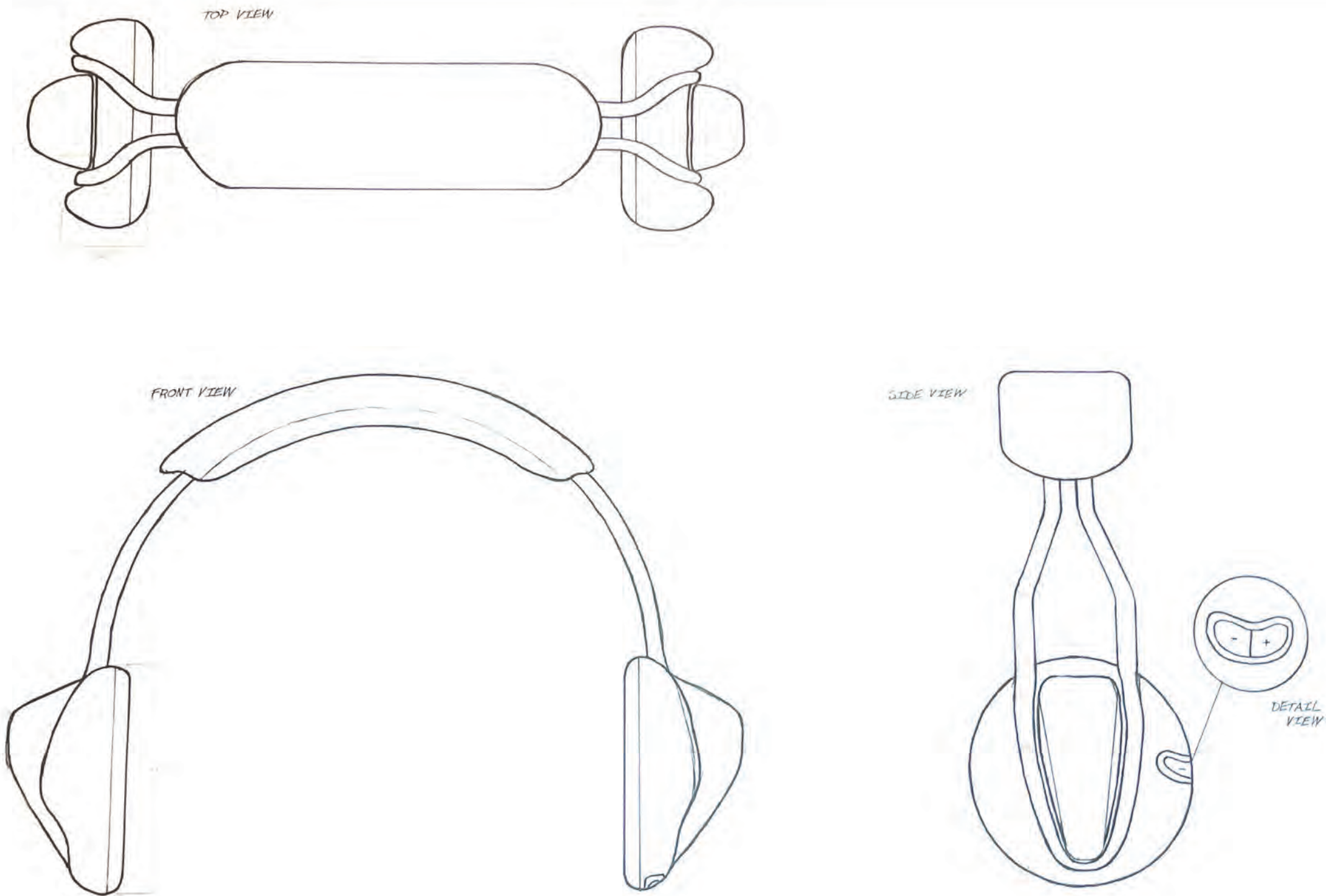
Ultimately, the circular form of the first model proved to be more comfortable, and truer to the Owala aesthetic, than an ellipsoid base.



The series of low fidelity models developed to represent the headband of my product provided significant insight into the best course of action for developing this component in its final form. The headband proved to be a surprisingly difficult component to fabricate, especially with respect to accurately conveying the curvature of the arch.

The first model (made from cardboard) was too large relative to the other components of the design. Taking this into account, I made a second model (this time out of XPS foam) at a smaller scale. A second round of testing demonstrated that this form was definitively more accurate in terms of size, but the radius of the arch was still too large.

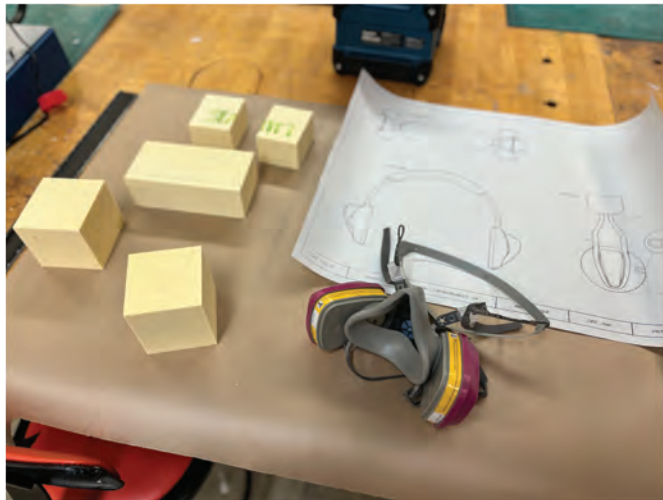
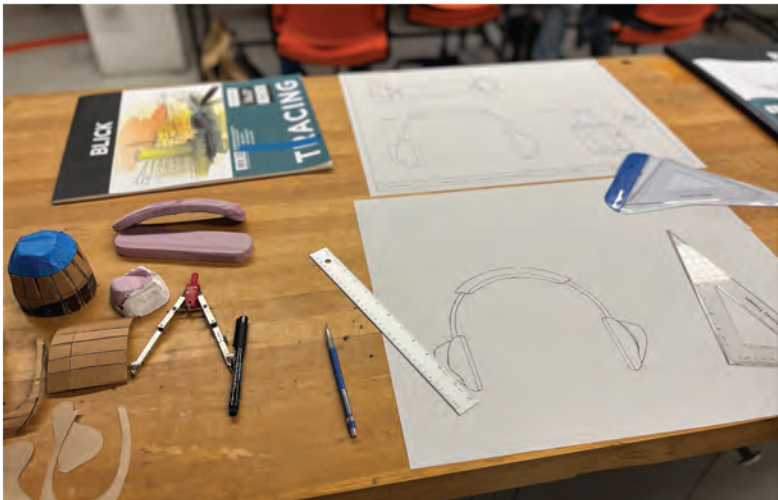
To correct this issue, I measured the circumference around the heads of several potential users and decided on a radius that accurately represented them to the best extent possible. This radius was then translated into my refined orthographic sketches.





From product analysis and sketching, to low and high fidelity model development, this project has entailed extensive iteration. At every turn, I have paused to assess the state of my progress and considered potential adjustments to be made.

I have undoubtedly gained a deeper appreciation for the fluidity of the process, jumping back and forth between sketching and development as needed in order to produce the best result possible.

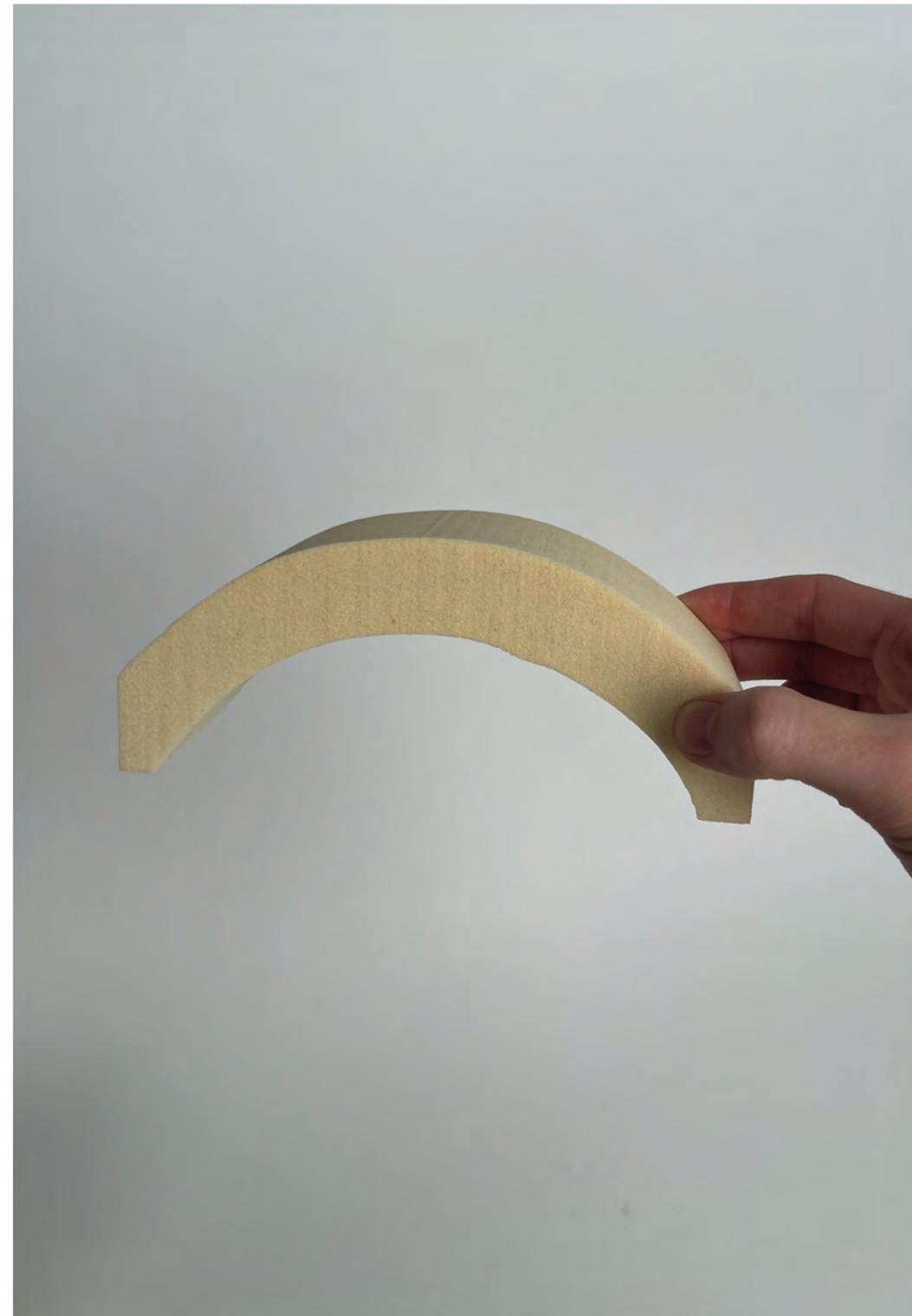
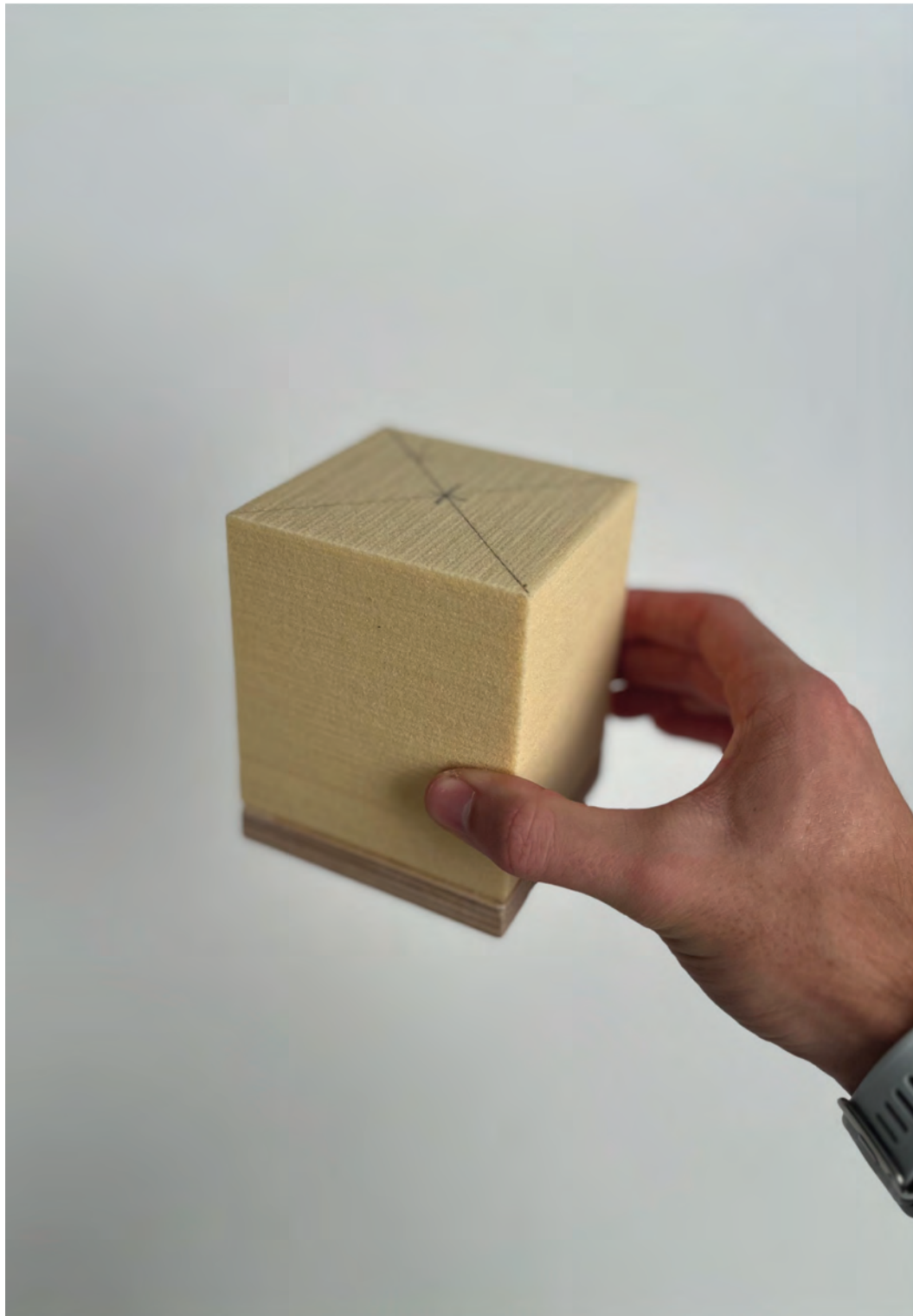




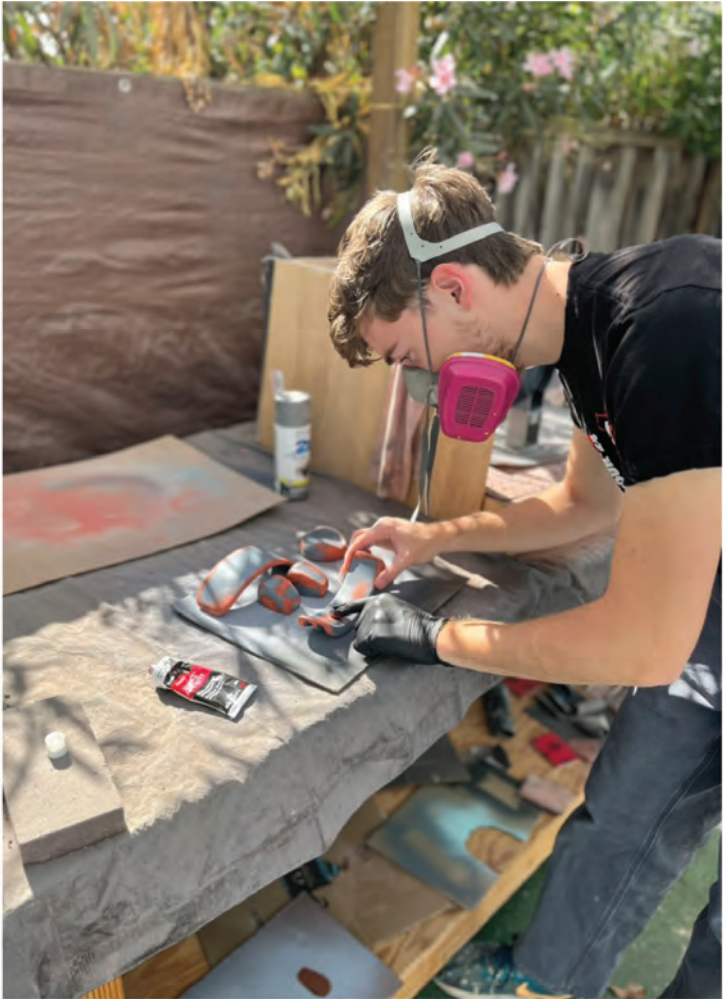
Product Line Extension | High Fidelity Progress

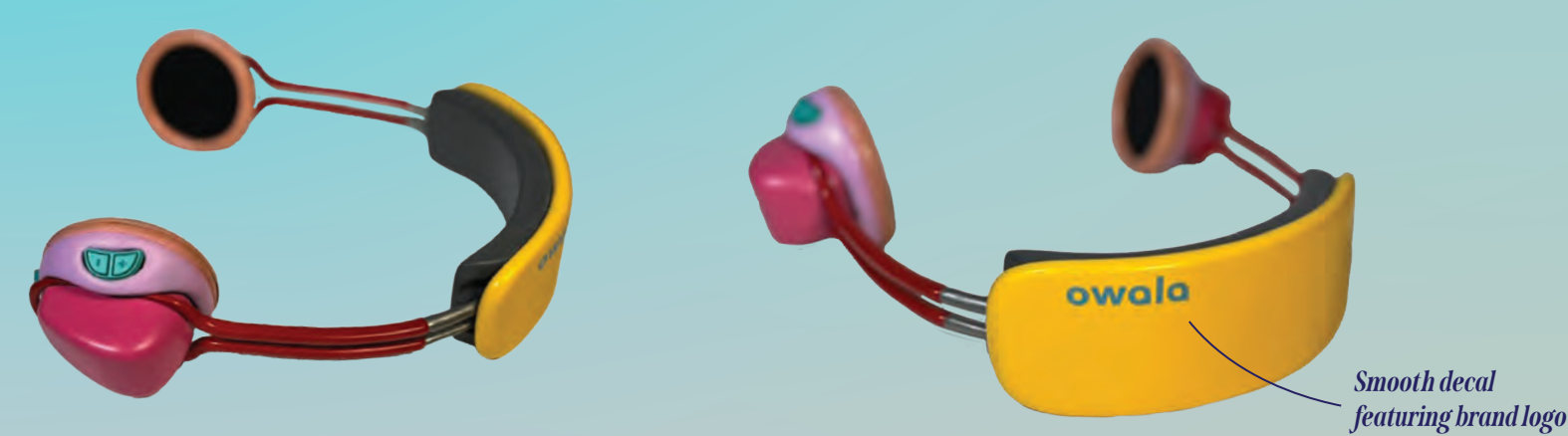
Luke Seeley | DES 360 Fall 2024

After settling on a refined, dimensioned form via orthographic sketching, I blocked out the required amount of PU foam for my high fidelity model and began cutting it to shape. I also created a series of stencils/templates derived from my orthographic sketches to ensure that the symmetrical components of the form actually stayed true to their intended shape. Looking ahead, my focus is on turning the ear muff components on the lathe and preparing them for detailing.







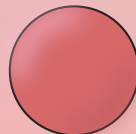
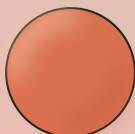
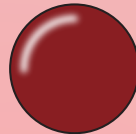
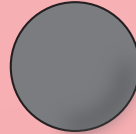


Description

The owala FreePhonic headphones boldly re-imagine the vibrant and youthful aesthetic of the FreeSip water bottle to create a wearable accessory that harnesses owala’s signature curvilinear forms.

A series of inset plastic components around the base of the headphones echoes the stepped orientation of the FreeSip cap. Simultaneously, the overhead band of the FreePhonic headphones reflects the softness of owala products via the use of continuous bends and warm colors. Cumulatively, the various curvilinear forms yield a fluidity and intelligible complexity that make these headphones distinctly owala.

Materials

- | | | |
|--|---|--|
|  <p>Hard, smooth matte pink plastic</p> |  <p>Powder coated matte yellow metal</p> |  <p>Smooth, rubberized silicone salmon cushion</p> |
|  <p>Stainless steel with semi-gloss maroon paint</p> |  <p>Hard, smooth semi-gloss teal plastic</p> |  <p>Hard, smooth matte purple plastic</p> |
|  <p>Soft, gray synthetic leather cushion</p> |  <p>Smooth stainless steel</p> |  <p>Soft black speaker mesh</p> |



owala FreePhonic



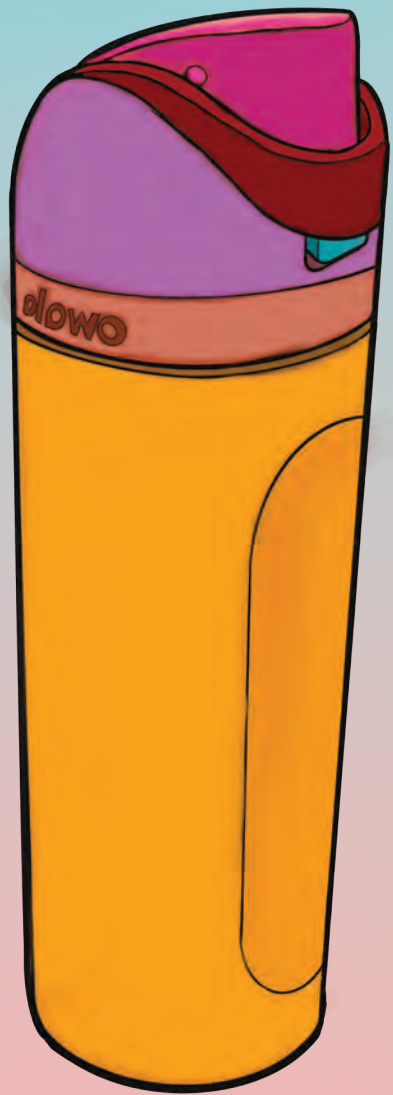


This project has been one of the most valuable I've had the pleasure working on throughout my time in the design department at SFSU. Over the course of this process, I've gained a newfound affinity for high-fidelity model making, and have learned a lot about my own process as a designer.

Often, I feel myself falling back on the practice of 3D modeling in the digital space and using rapid visualization techniques to understand my ideas. While those skills remain highly valuable, committing to working on a high-fidelity model primarily by hand over the course of more than a month prompted me to slow down and really consider the intention behind the form of my product in a way that I hadn't before. There is something inherent in the process of working by hand that informs the designer on an intuitive, gut-level. This has paid dividends in the final result of my work.

There are, of course, certain aspects of my product that were better suited for techniques and materials other than hand tools and PU foam, but this process really encouraged me to think about the utility of materials and fabrication methods to ensure that I was utilizing each one with intent rather than ease. I will remember this project fondly, and I look forward to creating more high-fidelity product models in the future.





Thank You

