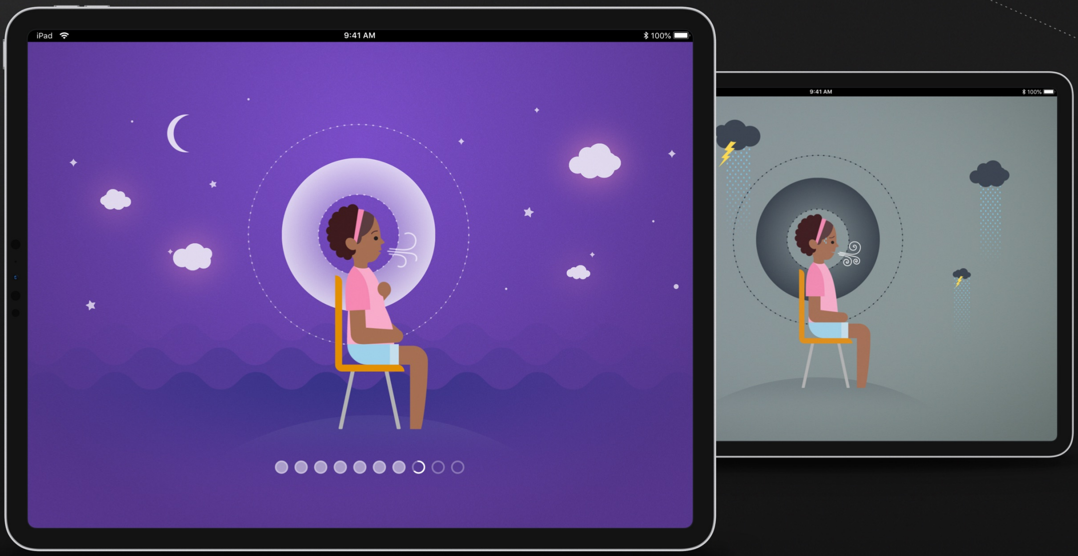
TRISTAN
DWYER

Breathe Deeply

How do you teach kids aged 6-9 a deep breathing technique? You test, iterate, test, iterate, test... (you get the picture).



Deep Breathing Screenshots - View the Final Animation

The Team and My Role

As the product design lead on this endeavor, I was responsible for the overall strategic and creative approach to teaching and guiding users on deep breathing. The team consisted of myself, a product lead, a writer, voice actor, and front-end engineer.

I led all design and animation work – including research, creative strategy, user testing strategy, prototyping, interaction design, and UI design.

The Challenge, & Our Solution

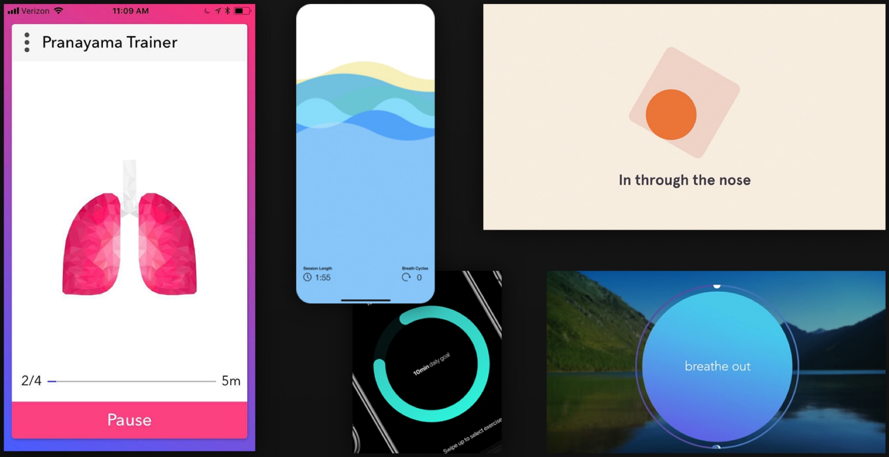
When you think of “deep breathing”, you might think, “simple”. However, there’s a lot to consider including how to position your hands, timing of breathing, body position, the list goes on. Our product was focused on kids aged 6-9, so our solution needed to be dead-simple and guide them in the moment.

Our proposed solution was to create a series of simple interactive videos. Users would be guided through the steps with illustrated animation. They could also pause and replay steps if necessary.

How We Got There – The UX Design Process

I had to be extremely flexible and adapt our normal user testing approach for this one, as it required iterating on a product that was animation-driven. It still stands as one of my best cases of user testing driving the design of a product. In the end we blew the goal we had out of the water as a result.

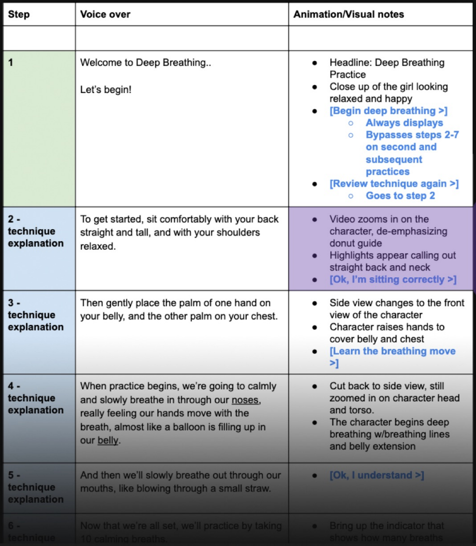
Research of various breathing guides



1. Research

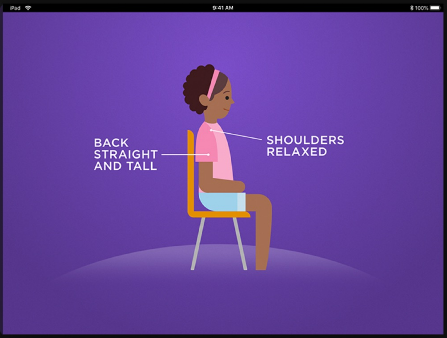
Many existing methods already exist for teaching deep breathing in a digital context. I spent a lot of time researching online training, youtube videos, stress relief mobile apps, etc. as well as guidance from our clinical partners. From there we were able to see what worked well and what didn't. This also gave us a landscape of the "competitors" to our feature.

Breathing script broken into sections



Step	Voice over	Animation/Visual notes
1	Welcome to Deep Breathing.. Let's begin!	• Headline: Deep Breathing Practice • Close up of the girl looking relaxed and happy • **[Begin deep breathing >]** ○ **Always displays** ○ **Bypasses steps 2-7 on second and subsequent practices** • **[Review technique again >]** ○ **Goes to step 2**
2 - technique explanation	To get started, sit comfortably with your back straight and tall, and with your shoulders relaxed.	• Video zooms in on the character, de-emphasizing donut guide • Highlights appear calling out straight back and neck • **[Ok, I'm sitting correctly >]**
3 - technique explanation	Then gently place the palm of one hand on your belly, and the other palm on your chest.	• Side view changes to the front view of the character • Character raises hands to cover belly and chest • **[Learn the breathing move >]**
4 - technique explanation	When practice begins, we're going to calmly and slowly breathe in through our noses, really feeling our hands move with the breath, almost like a balloon is filling up in our belly.	• Cut back to side view, still zoomed in on character head and torso. • The character begins deep breathing w/breathing lines and belly extension
5 - technique explanation	And then we'll slowly breathe out through our mouths, like blowing through a small straw.	• **[Ok, I understand >]**
6 - technique	Now that we're all set, we'll practice by taking 10 calming breaths.	• Bring up the indicator that shows how many breaths

Script animated in sections

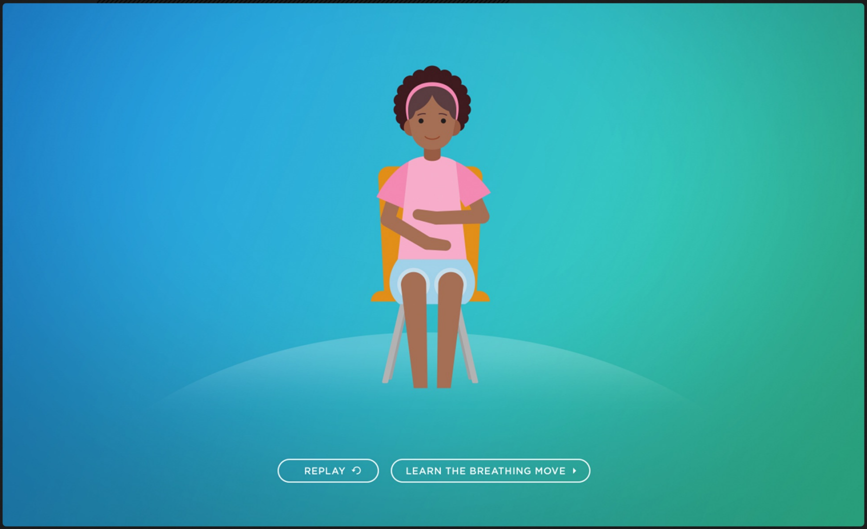


2. Iterative design and user testing approach

Based on our research, we decided to go with interactive animated videos. This approach was great for education, but is very time intensive to build. We wanted to get something ready to test quickly, while not designing the full feature before we knew it worked.

With speed and user testing in mind we crafted a training script that was broken down into 5 sections. To start, I designed and animated one key section with a dummy voiceover. We held a number of user sessions where we read directly from the script. When we reached the point in the script for the guide, we switched to it. We found several areas for improvement and repeated testing the following week. However, this time I animated an additional section. We repeated this process multiple times over several weeks, refining the feature each time.

Interactive Prototype I created with Javascript/HTML5/CSS



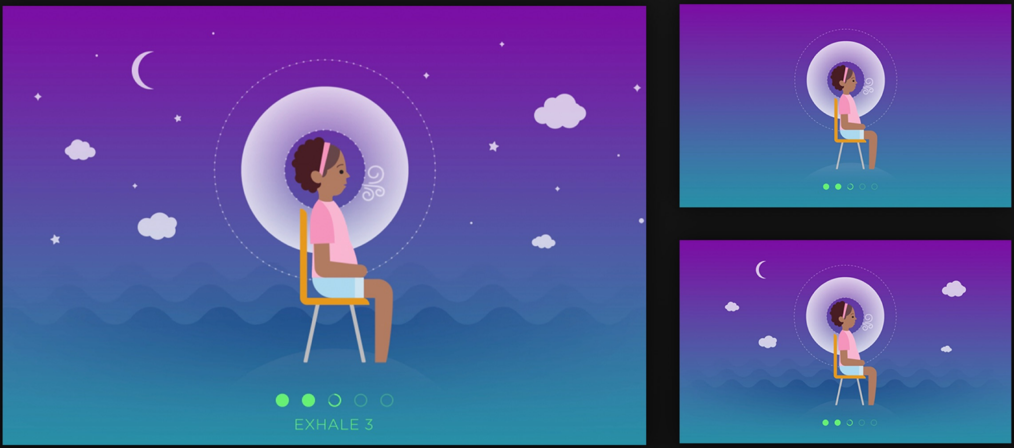
3. Prototyping

Once we had the draft animation completed, I built a javascript prototype that allowed users to go through the experience fully un-guided, allowing us to preview the product in action without committing engineering resources. After additional tweaks we got to the point that everyone we tested could effectively demonstrate the technique without the aid of the guide.

How We Got There – The UI Design Process

When we started, I had already defined the design direction for the product. However, the goal of this feature was meant to actively reduce stress. Everything from the illustrations, to the music, to the voiceover, needed to exude calmness and relaxation.

Several variations of breathing guide elements we tested



1. Not Just a Breathing Guide – A Breathing System

Several elements work together to create a “guide” effect that users can follow along with. Through testing we were able to see the multiple elements helped with different users. We were also able to focus on the best performing guides and cut out the others.

Along with testing comprehension of the UI, we tested various design approaches with users to gauge their reactions to the design direction. We got consistent feedback from users on what resonated with them, and were able to hone in on a final design direction.

Moving From Prototypes to the Real Thing

Besides the process of documentation, we had an additional challenge as our product was web based, but serving video. We needed to carefully balance load times between videos to avoid delays and flickering. I worked with our front-end engineer to test a number of combinations of rendering approaches. We found the best balance of quality and load time, and also planned a more dynamic streaming approach in the future.

First-Hand Results

When all was said and done, we had built a digital guide that kids liked, effectively helped them relax, and everyone we tested with could use quickly and effectively. It's currently in use in an active clinical trial.

I was able to see this in action personally. My son, who was 5 at the time, was having a temper tantrum one night. I had previously shown him the breathing guide, and on his own without prompting, he used the deep breathing technique to calm himself down. It was a great feeling to see how the power of design and technology can help people first hand.

The final product is part of an iPad app, but you can view the animation here.