WELL-BEING BY DESIGN FELLOWSHIP 2025

CASE STUDY

The 2025 Well-Being by Design Fellows participated in a four-month professional development program for designers and producers of interactive kids' technology and media. They met online to workshop their current projects, network with other fellows, and gain insights from research and industry leaders as they worked to incorporate principles of well-being into their designs. We are delighted to share highlights from each fellow's experience.

Noelle Posadas Shang

Noelle Posadas Shang is a seasoned UI/UX designer specializing in children's media since 2011. Focused on educational content, she crafts engaging experiences that inspire creative problem solving. Believing in kids' critical thinking abilities, her work empowers young users to meaningfully participate in designing solutions and encourages them to become imaginative, proactive change-makers for the world's future.

BIODIVE

PRODUCT: *BioDive* blends an interactive website and immersive WebVR to guide students through the fascinating world of venomous marine snails.
TARGET: Students in grades 6-9

→ **KILLERSNAILS.COM**

Killer Snails designs immersive science experiences that empower students to step into the role of scientists. Our mission is to inspire a lifelong passion for science and foster a deep respect for its role in shaping the future. By blending storytelling, exploration, and real-world challenges, we help excite the next generation of scientists and informed decision-makers.

Through *BioDive*, we aim to inspire the next generation of scientists and community leaders to value science and data as tools for making a difference. Throughout the experience, students share their findings with Chief Scientist Dr. Mandë Holford, one of Killer Snails' cofounders, who studies marine snails and their venom to help develop treatments for human diseases. As students explore, they discover how industrial pollution is changing the abiotic factors in the snails' ecosystem. They must analyze data and communicate their insights to support change. With the support of the Well-Being by Design Fellowship, we've revisited the project to better align it with children's needs and enhance overall well-being.

FELLOWSHIP ARC

BioDive is a student-led experience that supports children's well-being by encouraging them to explore different **identities** and envision future careers in science. Students connect with real-world science by communicating their findings to Dr. Mandë Holford, a scientist who studies marine snail venom for potential medical treatments.

Throughout *BioDive*, students are challenged to think critically and demonstrate their **competence** as they engage with complex ecosystem relationships, complete interactive activities, and respond to questions.

They are encouraged to be **creative** by designing models, forming hypotheses, and expressing their understanding in their own words. Ultimately, students share their insights with the scientific community, advocating to end industrial pollution and runoff in the venomous snails' ecosystem.

HOW CAN MY PRODUCT BETTER ADDRESS CHILDREN'S WELL-BEING?

After doing an audit of *BioDive* and our codesign session with the youth design team we feel we can improve the overall experience and how it supports well-being by:

+ Improving the narrative to help students to better **identify** with scientists and to share more content featuring Dr. Mandë Holford.

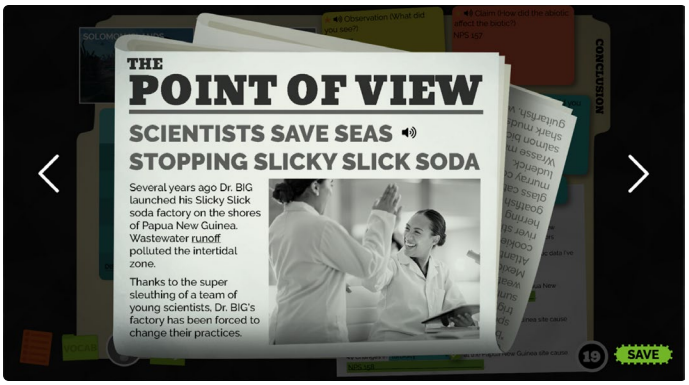
+ Improving students' feelings of **competence** by ensuring that interactions where students respond to prompts offer better feedback.

+ Improving students' **autonomy** by ensuring that interactions in the webVR align with existing design patterns for playing in a first person experience.

> *Participating in the co-design sessions with teen designers and deepening our understanding of co-design was an incredibly rewarding experience. We engaged with the teens not just as end users of our products, but as creative collaborators whose feedback is rooted in their own lived experiences and design ideas. Their contributions were invaluable for this project and future ones. Hearing from them about what made them feel like scientists gave us insight into how we can create experiences that help students see themselves in that role. A common theme that emerged was how meaningful the youth design team found labs and hands-on science activities. These types of lessons allowed them to step into the role of scientists as they explored hypotheses and made real discoveries. One student recalled a lab in which the class tested soil from a local farm for key nutrients essential to crop growth. After analyzing the results, they shared their findings with the farmers, helping them make adjustments to grow healthier food. With BioDive, we hope to recreate that same sense of impact by having students use science, data, and observation to inspire action and drive meaningful change.*

REFLECTION

In retooling this project, we focused on strengthening the narrative and core themes to help students more deeply identify with scientists. We aimed to center the experience around Dr. Mandë Holford, our Chief Science Officer and cofounder, so students could connect with a real scientist and feel part of a larger scientific **community**. We also prioritized improving the user experience, ensuring smooth webVR navigation and providing meaningful feedback in the digital science journal activities to improve **autonomy** and **competence**.



LOOKING AHEAD

Our team has used the insights gained through the fellowship and collaboration with the youth co-design team to make thoughtful, immediate improvements to *BioDive*. One of our main goals was to strengthen the overall narrative and ensure that the flow of activities supports and enhances the story. By refining how students move through the experience, we made the interactive elements more purposeful and engaging, allowing the narrative to unfold through student exploration and discovery.

We also brought Dr. Holford into a more prominent role. She now appears in two additional videos: one welcoming students to the experience and another highlighting their use of data to investigate environmental threats facing venomous marine snails. Her presence helps students feel connected to a real-world scientist and part of a broader scientific community.

In response to feedback from the youth design team, we improved the webVR navigation by introducing more intuitive, familiar controls that make the experience smoother and more accessible.

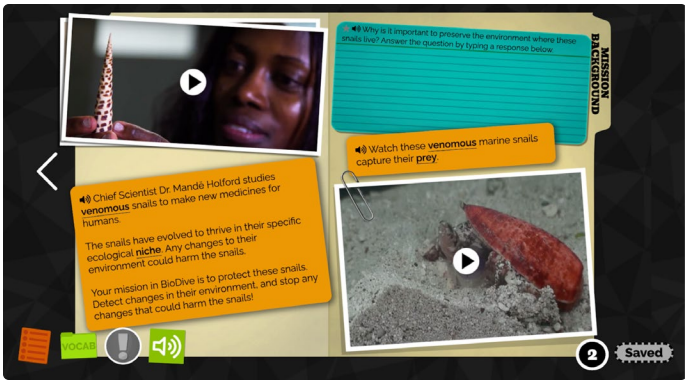
We are excited to launch the new and improved *BioDive* at the end of the 2025 school year. Our hope is to spark curiosity, build confidence, and inspire the next generation of scientists and environmental advocates.

> *The RITEC framework centers around children being the experts, they know what they like, what makes them feel accomplished and safe, and what best addresses their well-being.*

POTENTIAL IMPACT FOR KIDS (USERS) AND THE FIELD

My approach to product design and testing with kids has completely changed. Learning more about co-design and working with the team of youth designers has opened my eyes to the possibilities afforded to designing *with* kids instead of designing *for* kids. Being on their level and exploring *BioDive* through their lens really helped me to evaluate what wasn't working. I will strive to have kids join us earlier in the design process when creating products in the future.

Hearing from kids directly about what well-being meant to them was transformative. As an adult, I often frame the well-being of children around protection, but in the initial interviews with children, so many asked for much more. They wanted to feel creative and accomplished, to see themselves and share with the wider community, all while being safe and secure in the platforms they use. I've learned that kids don't want to be sheltered from the world. They would like to explore the scary stuff while in the relative safety of a secure platform that will allow them to do so.



FINAL THOUGHTS

After the fellowship, we had the opportunity to bring *BioDive* back into the classroom. We playtested with 120 students who were engaged, having fun, collaborating, and even teaching one another throughout the experience. They didn't worry about getting things wrong—they felt empowered to explore. Instead of feeling self-conscious about mistakes, they asked their classmates for help. Well-being can be hard to define, but it's unmistakable when you witness it. This was the most at ease I've ever seen students while using BioDive.

STUDENT QUOTES

"The games made the learning fun."

"The interactive games helped me understand a lot."

"It's engaging, more than a minigame with text."

"It was realistic, fun, and taught me stuff."

"The action is detailed and the objective is clear."

"Very fun way of learning."

"Very welcoming"

"I like how interactive it is, it's fun and educational."

If you would like to pilot *BioDive* please contact us at info@killersnails.com.

SESAME WORKSHOP

Joan Ganz Cooney Center

For more information about the Well-Being by Design Fellowship program, please visit joanganzcooneycenter.org/fellowship2025