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.

Phoebe Jiang

Phoebe Jiang is a learning designer, media producer, and mom. She has a background in child development and international education from Teachers College, Columbia University. An avid storyteller in all mediums (from interactive games to long-form video content), Phoebe specializes in crafting meaningful, culturally responsive media experiences for kids and their grown-ups. Her work with Sesame Workshop, Little Airplane Productions, and Age of Learning highlights her passions for intergenerational play, digital thriving, and maximizing the joy in learning.

Math is everywhere! and families engage in math in more ways than they realize (Ginsburg et al., 2008). Moreover, children develop important social and emotional skills through meaningful math talk and activities with their grown-ups (Clements & Sarama, 2014). To better support families in identifying, creating, and sharing positive math experiences with their children, the *Family Math* app will meet them where they are. With young kids (2- 4 years old) spending over two hours on screens (Common Sense Media, 2025), **what if a digital math learning platform could not only be joyful, but also nurture their well-being?**

This project extends PBS SoCal's catalog of analog experiences into a child-facing, interactive app featuring games and videos, emphasizing math positivity, confidence, and competence in foundational math skills. The app captures the messiness and creativity of familiar arts and crafts activities by blending digital and real-world experiences.

PBS SoCal

FAMILY + MATH

PRODUCT: Family Math

TARGET AGE: 3 to 5

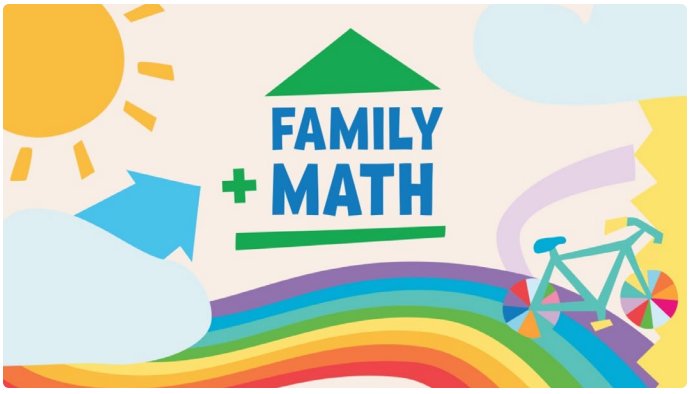
The *Family Math* app is a kid-centered app showcasing how early math can be joyful, open-ended, and interactive. "Family" is core to Family Math, so the app will encourage co-play and co-viewing across ages. Primarily designed for young kids (3- to 5 years old), the app integrates "math talk" and co-play prompts for grown-ups (parents/caregivers, educators, and early childhood professionals).

→ **PBSSOCAL.ORG/EDUCATION/PBS-SOCAL-FAMILY-MATH**

This includes a novel feature—screen time breaks—where users take the fun offline to screenless mindfulness moments, math missions (think math-inspired scavenger hunts), and more! This feature serves an additional purpose of empowering kids and families to be more critical curators and consumers of media, so they are better equipped to advocate for digital features that center well-being.

WHAT COMPONENTS OF WELL-BEING DOES MY PROJECT ADDRESS?

All Family Math programming (ranging from in-person, multigenerational workshops, printed materials, to digital play) aims to represent and uplift the range of diverse lived and linguistic experiences of the young children and families in Southern California, and RITEC provides a meaningful framework and foundation to advance these efforts. The *Family Math* app addresses **Autonomy** (through the open-ended experience, where children can freely choose how to engage in their digital play), **Creativity** (by offering digital play experiences that encourage children to use their imagination to build, invent, and experiment), as well as **Competence** (by contributing positively towards their perceptions of their math ability).



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

+ **Promote Emotional Development and Regulation:** Managing big emotions and nurturing emotional well-being is integral to healthy early childhood development. Moreover, math and social emotional learning are inextricably linked. We are considering additional features and programming to encourage children to not only recognize, but also reflect on, a range of emotions and provide opportunities to learn important self-regulation skills.

+ **Intergenerational Play:** We're exploring how to more seamlessly bring together young children and the people in their lives, from siblings to grandparents and babysitters, to playfully engage with math. How can prompts geared towards grown-ups in our app support kids initiating this type of play or vice versa?

+ **Fostering Positive Math Identities:** We aim to create a joyful, digital playground where young children can not only feel confident, capable, and engaged with math, but also understand that making mistakes is part of the learning journey! My hope is that we can build this into the new games that will populate the app.

REFLECTION

The Youth Design Team members kickstarted a mindset shift for our development team, inspiring deeper reflection on when and how to co-design with youth. Previously, Family Math resources were designed primarily to support adults with the delivery of meaningful math learning in a home environment. With the app, we've flipped that model—putting kids at the center and designing with a child-first mindset. The RITEC framework provided important shared language for both our internal team and Youth Design partners, which helped guide our team conversations, including thinking critically about how best to bake well-being into the structure of the app. The Youth Design team validated initial hypotheses and offered wonderful insights on how to lean into the math positivity and joy embedded in the overall program!

> *This fellowship has opened my eyes to a world of possibilities not only in the realm of well-being, but also for kids media as a whole. I feel fortunate to have met and learned from all my fellow fellows, especially those leading start-ups and/or pushing the boundaries when it comes to imagining how well-being can be woven into our lives. I look forward to continuing to learn, grow, and innovate in this space.*

LOOKING AHEAD

The *Family Math* app is currently in the early stages of development (we were able to share initial wireframes with the Youth Design Team). In collaboration with Makefully Studios, we will be developing the app and associated content over the next two years. We're particularly excited about two features: the "screen time breaks" and co-play prompts directed at parents and caregivers. We look forward to optimizing in-app and offline experiences for both kids and grown-ups. Thanks to the fellowship, I've been inspired to pursue a Family Advisory council (composed of parent-child dyads), which will help systematize our co-design processes to ensure that we are best serving our target demographic. Additionally, we're weaving social emotional learning into our in-person workshop offerings, and we're pleased to begin piloting of FM+ Feelings.

+ With the *Family Math* app, we hope to provide all families with high-quality, engaging math experiences that foster young children's well-being and their relationships with caregivers.

+ We aim to blend digital and physical play by providing time and space to take learning beyond the screen. We hope our success here will allow us to extend our Family Math offerings to other subject areas, such as literacy.

+ By building on our special value proposition as a public media organization, we are uniquely positioned to offer an alternative to "business as usual" metrics and KPIs. Encouraging kids to take "screen time breaks" runs counter to strategies and features that aim to keep kids in apps. Our hope is that these efforts inspire other media organizations to continue innovating in this space.

KEY TAKEAWAYS

+ **Finding community and camaraderie:** Well-being encompasses many dimensions of the lived experience. As such, it's near-impossible for products to fully address all aspects of the RITEC framework. After being encouraged to not think of the framework as a checklist, and in conversation with other fellows on their projects, I realized the power of our collective efforts. I'm not only a designer of educational, interactive media, but also the mom to young children. So it's heartening to see how so many grown-ups are centering well-being in their efforts, which will have positive effects on the ecosystem as a whole.

+ **Inspired to innovate:** This fellowship has opened my eyes to a world of possibilities not only in the realm of well-being, but also for kids media as a whole. I feel fortunate to have met and learned from all my fellow fellows, especially those leading start-ups and/or pushing the boundaries when it comes to imagining how well-being can be woven into our lives. I look forward to continuing to learn, grow, and innovate in this space.

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SESAME WORKSHOP

Joan Ganz Cooney Center

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Danny Pimentel

Danny Pimentel is an Assistant Professor of Immersive Media Psychology and Director of the Oregon Reality Lab at the University of Oregon where he develops immersive storytelling experiences that address social/environmental issues. His projects have been supported by Meta, Snapchat, Unity 3D, and National Geographic, among others.

Growing up in Miami, the ocean has always been more than just water to me—it's tied to my culture, community, and well-being. That connection drives my passion for protecting it. One of the most important ways to do that is by investing in a STEM workforce that reflects the diversity of our society. Yet, despite ongoing efforts, the number of scientists from underrepresented communities remains stagnant due to various factors:

+ **Identification:** Students may not personally know a marine scientist, or fail to identify with their depictions in media, in part because they don't look like them or share similar cultural identities, a gap adversely affecting interest in science careers.

+ **Experience:** Access to the ocean and experiential science activities, such as diving, are limited due to socioeconomic and geographic barriers, limiting students' ability to understand marine science career pathways.

UNIVERSITY OF OREGON

PRODUCT: VESL (Virtual Excursions for Science Learning)
TARGET AGE: US teens (13-18)

→ **OREGONREALITYLAB.COM/DANNY-PIMENTEL**

VESL (Virtual Excursions for Science Learning) is a social virtual reality (VR) marine science career simulator. Users step into the shoes of a marine biologist and embark on a marine science excursion deep in the Pacific ocean, working together to study marine food webs. Based on a real-world marine science excursion, users gain experiential knowledge about marine science careers, key concepts in marine biology, and the unique instruments and processes used by actual scientists to study the ocean.

+ **Science Identity:** Without identification and experience, views of science can sour, interest in STEM careers can decline, and science as a whole becomes less a part of a person's identity.

OUR PROJECT

VESL was developed to address this gap, and provide youth with an opportunity to build their science identity and connection to the ocean through social, experiential learning in VR.

> *Learning from industry experts, researchers, and youth design teams allowed me to improve my approach to both re-designing VESL, and implementing immersive storytelling more broadly, ensuring that the unique considerations of emerging technology are leveraged to add value to our end users' lives.*

WHAT COMPONENTS OF WELL-BEING DOES MY PROJECT ADDRESS?

VESL currently addresses several dimensions of the RITEC framework, namely **identities**, **competence**, **relationships**, and **autonomy**. By enabling users to design their virtual avatar, and embody it during the mission, users quite literally see themselves as a marine biologist (identities). Once aboard the ship, users must collaborate with other users (relationships) to maneuver the ship, deploy real-world scientific instruments, and gain hands-on experience conducting marine biology research (competence). Through this process, users gain points, unlock achievements, and discover various species of plankton (autonomy) as they beat the clock.

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

Based on feedback from WBxD fellows, staff, alumni, and the Youth Design Team, we identified three improvements that would enable VESL to more effectively contribute to well-being outcomes.

+ **Increase Character Customization:** Scientists have personalities too, and what people wear - even at work - can reflect identity and support well-being. Currently, users choose between four roles and four colored vests and hard hats. We're expanding avatar customization to let users express themselves and feel more connected to their scientist role.

+ **Improve on-boarding:** Users can feel lost in VESL as they orient themselves to the world. Text instructions alone don't work well in immersive environments. We're redesigning onboarding to build confidence and clarity—starting the journey in a briefing room, adding voice-over narration, and providing clearer descriptions of each role and its duties.

+ **Incentivize exploration of ship:** While users tour the ship during onboarding, there's little reason to revisit areas like the mess hall or dorms during the mission. To encourage exploration and connection, we're adding achievements and designing mission moments that bring players together in these areas before, during, and after gameplay.

REFLECTION

Feedback emphasized making VESL more welcoming, accessible, and reflective of the full experience as a marine biologist. Specifically, two key takeaways are significantly shaping the future of VESL:

+ **Humanize Scientists:** Real scientists don't work nonstop—they rest, connect, and recharge. Players want the full story, so we're integrating moments of play, socialization, and downtime as essential parts of the mission, not just optional extras.

+ **Support Cross-Platform Access:** Not all students want—or are able—to use VR. To ensure inclusivity, we're expanding access across platforms so users can engage meaningfully whether they're in a headset, on a desktop, or using other devices.

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

+ **Accessible Experiential Learning:** VESL validates and positions social virtual worlds as viable tools for simulating STEM careers in ways that are otherwise impossible for most youth. I hope that more designers lean into this space, and leverage social VR as an informal learning tool across STEM disciplines.

+ **Best Practices:** In social VR, users share virtual space but come from varied physical settings—noisy homes, limited space, or shared environments. Designers should support flexibility with seated modes, adjustable audio, and inclusive onboarding to ensure all players can participate fully, regardless of their real-world circumstances.

+ **Pathways to Science:** A player's first marine science expedition in VR can spark lasting interest. Designers should leverage this momentum by offering follow-up resources, such as real-world crew bios or links to local programs that help them see a viable pathway to their place in the scientific community.

LOOKING AHEAD

VESL's next phase of development focuses on (a) expanding accessibility across platforms, and (b) redesigning the experience to better address user well-being. Overall, we want social VR experiences like VESL to function as accessible informal science education, and playspaces where youth can experiment with various science careers and mold their STEM identities.

Thanks to the insights gained through this fellowship, I am now working with HTC VIVERSE to adapt VESL to their platform, allowing users to access the experience on both mobile devices and VR headsets By redesigning VESL on VIVERSE, I will be able to leverage the RITEC framework intentionally from the ground up, and implement the changes noted previously to better meet the needs of our players.

VESL was envisioned as a hub to simulate dozens of marine science careers in a playful, social way. We hope this redesign will allow us to expand our offerings beyond our single marine biology cruise to other career pathways in the ocean sciences. As such, we are eager to connect with industry and academic partners that can help bring our vision to life, whether through subject matter expertise, development assistance, or research collaborations.

SESAME WORKSHOP

Joan Ganz Cooney Center

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Maried Rivera Nieves

Maried Rivera Nieves is Senior Director of Operations and User Experience at Bilingual Generation. New to product management and UX, she brings a background in educator professional development focused on culture, race, and equity. Raised in Puerto Rico and Minnesota and now living in NYC, Maried is also an artist who brings her creativity and bicultural perspective to designing joyful, culturally rich bilingual learning experiences for children.

Bilingual Generation

Bili is a joyful, research-based bilingual learning app designed to help young children develop their bilingualism and biliteracy while fostering pride in their language and identity.

PRODUCT: Bili **TARGET AGE:** 3-8 → **THEBILIAPP.COM**

The *Bili* app is designed for emergent bilingual (EB) children ages 3-8 – starting with Latine learners – whose home languages and cultural knowledge are too often sidelined in traditional American classrooms where learning English is positioned as paramount. Built with families, educators, and artists, Bili offers bilingual content in languages like Spanish and Aymara in the form of stories, wellness activities, games, and community connection–all designed to build bilingualism and biliteracy alongside early literacy, numeracy, social-emotional learning (SEL), and science skills. Our goal is to affirm and sustain children's languages and identities from the start.

We call our approach "abuelita and science-approved": rooted in everyday family and ancestral knowledge, backed by research, and always culture-forward. Our content meets children in context and honors who they are, where they come from, and how they learn best. Every part of the experience is designed to spark joy, pride, and language development in young children, while strengthening connections between home and school. Through Bili, families reclaim their stories, and children grow up knowing that who they are, and how they speak, is powerful.

Our long-term vision is to grow a sustainable, replicable model that other heritage language communities can adapt to their own needs, wisdoms, and dreams.

WHAT COMPONENTS OF WELL-BEING DOES MY PROJECT ADDRESS?

Bili supports children's well-being by affirming their identities, building their competence across multiple learning domains, and celebrating linguistic and cultural diversity across the Latinx diaspora. Through bilingual read-alouds, affirmation and conversation cards, and simple games focused on early literacy, and numeracy, *Bili* offers low-stakes ways for children to build key skills. Featuring regional Spanish dialects, gender-inclusive Spanish, and eventually indigenous-language stories, every element is designed to foster joyful biliteracy development in a calm, safe, ad-free environment and help children build a sense of belonging rooted in culture, language, and community.

> *Participating in this fellowship opened up a whole world of research, resources, initiatives, organizations, and individuals doing exciting work around digital play, well-being, and co-design in children's media. Chief among them are my co-fellows, all of whom are kind, brilliant people working on creative and enriching projects our kids need.*

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

+ **Emotions & SEL Integration.** While social-emotional learning is already a critical component of Bili, we could do more to extend it across the app, not just in our Wellness and Community sections. Fellowship conversations around well-being metrics have shaped our current work with a coach to rethink SEL measurement and inspired ideas for how our *Bili* character could model emotional regulation through play.

+ **Creativity & Expression.** We plan to offer children the opportunity to personalize avatars and are exploring ways for them to contribute original writing or artwork. We want kids to feel like *Bili* is theirs by customizing their experience and expressing themselves through creative arts–key for language development and identity formation.

+ **Relationships & Social Connection.** We'd like to explore shared play inspired by group games played en familia or comunidad–aligning with *Bili*'s goals around numeracy, social-emotional growth, and designing technology that encourages real-world connection. Our Community section offers the most opportunity for innovation, and pilot users have suggested rich ideas for cross-cultural and intergenerational connection.

REFLECTION

I learned three key things about designing a product with well-being at the center: 1) Co-design is essential. Children, families, and educators must be design partners, not just testers. The Youth Design Team shared actionable ideas to improve our game onboarding and reinforced the power of user voice in design conversations. 2) Surveys are not developmentally appropriate for young children. Behavioral metrics may offer more meaningful, accurate ways to assess well-being (e.g., social-emotional skills). 3) Digital hygiene and AI literacy are foundational to product design, since children are growing up in a world where healthy tech habits are essential for their well-being.

LOOKING AHEAD

The fellowship affirmed that well-being should be a core design goal–not a secondary benefit, and equipped me with frameworks to help make that a reality. I'm looking forward to bringing what I've learned to our product team and proposing paths forward in making co-design a standing part of our development process, establishing separate more tailored design goals for our preschool and early school-age users, and reworking our approach to metrics. We invite educators, researchers, community organizations, and funders to join us in piloting and shaping *Bili*, so together we can create joyful, culturally rich bilingual learning experiences for kids.

+ **Prioritizing co-design.** We've partnered with families and teachers in the early stages of concept development and ongoing testing, but I now understand the value of engaging in co-design as an ongoing practice. Fellows past and present have shared exciting ideas about youth and caregiver advisory boards and other methods for creating regular feedback loops and co-design opportunities with our stakeholders, especially children.

+ **Refining developmental targets.** I'm learning that designing for ages 3-8 is both a strength and a challenge! In this early phase, we're focusing on building a strong technical and content foundation for bilingual learning. As we grow, articulating target outcomes (and design goals) by age group, especially for social-emotional skills and language development, will be increasingly important to ensure Bili supports users' well-being at every stage.

+ **Evolving our measurement strategy.** We're already re-examining how we measure social-emotional learning on *Bili*, and we recognize that well-being (in our context, strengthening children's cultural identity, sense of belonging, and confidence in their language skills, etc.) is a crucial but complex dimension to capture. We can build on our existing metrics by co-defining with children, families, and teachers what well-being looks like in practice. Co-defining success with our users will help us ensure our measurements reflect what truly matters, not just to us, but to our users.

We're also developing our logic model, and this provides a timely opportunity to embed well-being more intentionally across our platform. The frameworks introduced through this fellowship (like RITEC, Playful by Design and the Digital Thriving Playbook) offer valuable guidance to ground our design goals and methods. I see this as a long-term shift, but I'm excited to bring these ideas into our work and see how they can help us better support the children and families we serve.

SESAME WORKSHOP

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Jen Chiou

Jen Chiou 趙燕妮 is the co-creator of Quest Craft and founder of CodeSpeak Labs, which has taught over 25,000 students to code. Previously, her work at Crisis Text Line and Teach For All inspired her to continue working at the intersection of mental health, equity, and education innovation. As a mom of two pre-teen boys, she's passionate about co-designing playful, inclusive tools for kids.

Quest Craft

Quest Craft fosters kids' creativity and social skills through collaborative play using our culturally responsive tabletop role-playing game (TTRPG) designed for classrooms, community spaces, and homes.

PRODUCT: Quest Craft
TARGET AGE: 8-14+

→ **QUESTCRAFTKIDS.COM**

Role-playing games are powerful. They foster collaboration, creativity, and critical thinking. But in most schools, this kind of play is absent. As a mother and educator, I saw firsthand how pretend play gave way to isolated screen time for my pre-teen sons and their peers. The most common role-playing opportunities that exist were designed for older teens and adults, primarily based in Eurocentric fantasy traditions and are rarely embraced in educational settings. *Quest Craft* was born from the desire to bring the magic and research-backed mental health benefits of role-playing games and collaborative storytelling to every child—especially those whose stories are too often left out.

With the support of the Joan Ganz Cooney Center's Well-Being by Design Fellowship, we deepened our commitment to child well-being and responsible design. Our goal: to bring children on joyful, inclusive quests that enable them to practice creative problem solving and empathy while building social connections.

Quest Craft builds social-emotional skills; it can be played just for fun with a group of kids forming an adventuring party around a table, or to support specific academic goals through game-based learning in a full classroom setting. Students practice empathy, communication, and decision-making as they co-create stories. It's an inherently social experience as the digital game resources facilitate live, continuous conversations among players—along with some dramatic dice rolling as kids attempt to scale sky-high walls, charm non-player characters for information, and battle monsters. Many lesson quests align with learning standards in English Language Arts, social studies, and STEM.

> *Participating in the Well-Being by Design Fellowship helped us move from instinct to intention, from student playtesting to student co-design. We now have a shared language to design for well-being—and to explain why that matters to funders, schools, and families.*

WHAT COMPONENTS OF WELL-BEING DOES MY PROJECT ADDRESS?

Quest Craft's strengths directly support multiple RITEC dimensions including **Autonomy/Empowerment, Creativity, Relationships/Social Connection, and Diversity/Inclusion**. Depending on the quest, players can build their own characters or play pre-made ones that challenge them to see the world and act based on that character's backstory, motivations, and personality, which may significantly differ from their own. They are empowered to make choices that change the narrative, to work together with other players in an adventuring party to resolve disputes in novel ways, and to take risks and face in-game consequences in a structured but open-ended environment.

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

We've drawn from the best practices of traditional tabletop role-playing games (TTRPGs), which have been evaluated in primarily small group settings with young adults and older. This fellowship has enabled us to draw from the tremendous, varied experience of the other WBxD Fellows: designers with extensive experience working on children's products who have broadened our view of well-being strategies to incorporate.

+ We're experimenting with different ways to further lean into RITEC dimensions: for example, for **Safety and Security**, we are testing different "Red Card" mechanics that let players pause gameplay if something makes them uncomfortable—framed as a superpower, not a shutdown.

+ As we build a classroom-ready version of Quest Craft, we're trialing ways to support students' increasing **Competence** of knowledge and skills that align to academic and content standards. In a recent quest, students meet California social studies standards by learning about local Indigenous people.

+ We're adding reflection loops to help kids pause after a quest and think about what happened—not just in the story, but in their own heads and hearts. Structured debriefs help players connect their choices to real-world values, and explore how **Emotional Regulation** showed up for themselves and their party along the way.

WHAT HAVE I LEARNED ABOUT INCORPORATING WELL-BEING INTO MY PRODUCT DESIGN?

Because of the fellowship, we've moved beyond youth playtesting to youth co-design—building a team of young designers who will collaborate with us over several months to create a youth-authored campaign library and help us tackle essential questions like:

How can we invite kids to reflect on identity, ethics, and consequences—while still keeping gameplay fun?

From the Youth Design Team, we've learned:

+ **Autonomy matters.** Even when students make choices that may not be "adult-recommended", using in-game consequences (rather than restricting them) leads to more authentic engagement and learning.

+ **Different players, different needs.** Designing for players who are feeling shy, silly, or serious means offering flexibility. For instance, students who are feeling shy. prefer co-role-playing a character with a partner, having extra discussion time before sharing, or choosing from example options rather than making open-ended decisions on the spot.

From the RITEC framework and design toolbox, we gained a powerful lens for observing and deepening the well-being potential of our game design through its illustrations of the logic and real-world examples behind each feature. For example:

+ Kids love pet companions → design animal NPCs that encourage nurturing and care

+ Kids enjoy rolling dice → embrace uncertainty to build a sense of competence

+ Kids want to personalize avatars → support identity expression and exploration through creative customization

From JGCC mentors, fellows, and guest speakers, we also gained inspiration to expand immersion beyond traditional TTRPG formats. We're now prototyping integrated experiences—like mood-setting videos, tactile game props, and real-world movement (e.g., scavenger hunts)—to make sessions more emotionally and physically engaging.

In addition, we've grown in our understanding of how to design for both kids and the adults who support them. While adults want clarity, structure, and easy but comprehensive onboarding, kids often skip instructions to get straight to the action. Based on advice from other fellows, we're piloting different onboarding pathways for users to get started.

LOOKING AHEAD

We believe tabletop role-playing games should be part of every child's experience, as near-universal as playing LEGO, riding a bike, or conducting a science experiment. We're excited to help legitimize TTRPGs as powerful, research-backed tools for learning and well-being, not just niche hobbies. As we expand *Quest Craft*, we're working to make collaborative storytelling a joyful, inclusive norm in schools, homes, and community spaces across the country.

We see a future where adventurers of all backgrounds, abilities, and identities see themselves reflected in the quests they play—and where TTRPGs are embraced by educators and caregivers as a way to foster empathy, creativity, and critical thinking.

To get there, we're eager to partner with researchers, educators, and youth-serving organizations to scale this work in ways that are grounded in evidence and shaped by real-world classroom experiences. With the right allies, we can build a generation of kids who don't just consume stories or digital experiences—they co-create them, reflect on their choices, and imagine bold new worlds together.

SESAME WORKSHOP

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Kyrsten Novak

Kyrsten Novak is a senior user researcher specializing in children's digital experiences. With a background in human factors and developmental psychology, she has shaped technology products for young users at major tech companies. Her work spans education, health technologies, and family-focused products. Currently, Kyrsten leads research initiatives at Amazon Kids, focusing on devices and services for children ages 3-12 and their families.

amazon kids+

PRODUCT: Well-being in Children's UX: Evolving Heuristics for Digital Products

TARGET: For researchers and designers building and evaluating products used by kids ages 3-12.

→ **LINKEDIN.COM/IN/KYRSTENNOVAK**

User Experience (UX) Practitioners use heuristic evaluation frameworks to uncover design issues within user interfaces. Widely used and acceptable frameworks, such as Nielsen Norman Group's 10 Usability Heuristics, Basic Principles for Interface Design by "Tog" Tognazzini, and User Interface (UI) Tenets and Traps by Medlock and Herbst, are well-integrated in the experience design industry. However, child-centered product researchers, designers, and developers wonder:

"If these are usability violations for adults, do they apply to children's products as well?"

While some child-centered guides exist, such as Nielsen Norman Group's Children's UX: Usability Issues in Designing for Young People and various others for e-learning and gaming, they don't match the comprehensive scope of established heuristic evaluation general audience (GA) frameworks. These GA frameworks, combined with the Responsible Innovation in Technology for Children (RITEC) and child-and-youth participatory design, offer an ideal foundation for developing a new framework for child-centered user interfaces.

By integrating well-established usability principles with RITEC well-being components along with the perspectives of children and youth, we can better evaluate digital experiences for children, ultimately leading to products that better serve their unique social, emotional, physical, cognitive, and overall well-being needs.

WHAT COMPONENTS OF WELL-BEING DOES MY PRODUCT ADDRESS? HOW?

The future state of a child-centered heuristic framework intentionally integrates developmentally appropriate guidelines. For example, emotional development is a critical developmental need. The RITEC framework suggests that digital experiences should allow children to experience and recognize a range of emotions, and offer opportunities to learn to regulate those emotions. When discussing 'what makes a good product?' one youth design participant suggested that it's important to "have areas to reduce overstimulation" and that creators can do this by offering "breaks or music". Both kids and developmental experts identify the importance of incorporating opportunities to support skill growth for emotional regulation, signifying that this is a key component for a child-centered heuristic evaluation framework.

GA heuristics include ***"match between the system and the real world"*** as a clear principle for UI design, suggesting that designs incorporate words, phrases, and concepts familiar to the user, rather than internal jargon. While this should certainly carry over to a child-centered framework, we should expand our focus to integrate concepts that promote "competence" and growth for children. Since kids live imaginatively, matching the system to the real world may look a bit different for kids than it does for adults, and should be measured appropriately. Youth participants mentioned the importance of storytelling in an experience, and said that a "lack of storytelling," "lack of color," and "hard stops" makes for a bad product for kids. When comparing these insights to a child's "real world," we can understand why they are so important: kids thrive with narration, color is magical, and countdowns are powerful.

> *Meeting all of the incredible fellows and guest speakers was a highlight from the fellowship. It's inspiring to be surrounded by such a wonderful community of individuals dedicated to improving kids' tech products.*

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

+ **Continued Research & Innovation:** The fellowship demonstrated the industry's need for a fresh resource. After this program, I will continue to invest in the full development of this framework to ensure an accessible guideline is available to UX professionals (regardless of whether they have child-development subject matter expertise)

+ **Integration of the RITEC Framework:** The need to expand child-centered heuristics criteria to assess children's autonomy, competence, and emotional regulation in interface design is evident. Integrating this criteria into a framework will provide practitioners with a common sense of child-centered metrics for interface design. Continuing to evaluate how and why additional RITEC framework components should or should not be included is a necessary next step as well.

+ **Industry-Wide Impact:** Create synergy between UX, child development, and product design fields through industry and academic events in fields such as Human Computer Interaction, Human Systems Engineering, and User Experience.

LOOKING AHEAD

+ The Well-Being by Design fellowship has supported the foundation of child-centered heuristic evaluation framework, and I will continue to develop this for industry practitioners after this fellowship program.

+ Amazon Kids is leveraging the RITEC framework through its UX research initiatives to enhance UX workshops and user studies that help drive product and service innovations.

+ I will share progress on the child-centered heuristic framework and the RITEC framework at an upcoming Arizona State University seminar on multi-generational research, ensuring these principles reach the next generation of practitioners.

CHAMPIONING A CHILD-CENTERED APPROACH

+ **For UX Practitioners:** This work begins to bridge the gap between traditional usability metrics and children's developmental needs. It provides concrete tools for evaluating digital experiences from a child's perspective, enabling more informed design decisions. As we implement these heuristics in real-world scenarios, we're developing best practices for integrating well-being considerations into established UX workflows and heuristics specifically for child-centered products.

+ **For Companies and Leadership:** By incorporating these principles into design sprints and formal review processes, we can proactively address potential issues and create more child-friendly and child-centered products. This approach not only mitigates risks but also opens new opportunities for innovation in the children's tech world.

+ **For Education and Future Designers:** Introducing these nuances and frameworks at the university level, we're shaping the next generation of UX professionals to consider children's well-being from the outset of their careers. This educational integration ensures that child-centered design principles become fundamental to UX practice, gradually raising the standard for children's digital experiences across the entire technology sector.

SESAME WORKSHOP

Joan Ganz Cooney Center

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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.

Madlyn Larson

Madlyn Larson is a learning designer and project lead for Research Quest, a digital platform that empowers students to think like scientists. With a career-long focus on holistic learning, she designs inquiry-driven experiences that blend museum research, curiosity, and critical thinking to support the whole child—fostering confidence, creativity, and lifelong learning.

RESEARCHQUEST

Critical Thinking. Serious Fun.

PRODUCT: Research Quest: Fungus Farming Ants Investigation

A digital, inquiry-based science investigation that invites elementary students to explore the amazing world of fungus farming ants and develop early scientific thinking through data analysis, pattern recognition, and collaborative reasoning.

→ **RESEARCHQUEST.ORG**

Research Quest was initially designed for middle school science learners as standards-aligned, online investigations that replicate authentic scientific inquiry using museum collections and research. Recently, the Natural History Museum of Utah identified a need and opportunity to extend this model to younger learners, particularly 3rd graders, who are at a critical stage in developing curiosity, reasoning skills, and confidence in science. As highlighted in *Taking Science to School* (National Research Council, 2007), children in early grades are capable of engaging in scientific practices and benefit from inquiry-based learning environments that promote explanation and argumentation.

The Fungus Farming Ants (FFA) investigation is the first Research Quest experience tailored for younger learners. And, it addresses the clear need for high-quality, accessible science experiences for elementary students that foster critical thinking, as outlined in the *Framework for K-12 Science Education* (National Research Council, 2012) and the *National Science Education Standards* (National Research Council, 2012). The investigation invites 3rd graders to explore the symbiotic relationships within a fungus-farming ant community—relationships that have persisted for over 60 million years! By rooting the investigation in the museum's research and collections, these interactive learning experiences (embedded game and simulator) nurture curiosity, foster collaboration, and introduce scientific modeling in age-appropriate ways. It aims to scaffold foundational inquiry practices while making space for learner agency in exploration—key elements of childhood learning and well-being.

LEARNING GOALS

+ Support developmentally appropriate scientific reasoning in 3rd grade learners
+ Nurture curiosity and intrinsic motivation by offering surprising, real-world content
+ Foster early collaboration and discourse skills through structured discussion prompts
+ Build a sense of scientific identity and capability through low-stakes, high-engagement exploration

WHAT COMPONENTS OF WELL-BEING DOES MY PROJECT ADDRESS?

The Fungus Farming Ants investigation supports key components of well-being, including competence, social connection, and empowerment. Learners build competence through developmentally appropriate scientific reasoning, modeling, and problem-solving. Social connection is fostered through collaborative discussions, peer-to-peer sharing and interpretation of evidence. Empowerment emerges as students discover that their questions and ideas matter—they can think like scientists, engage in authentic inquiry, and contribute meaningfully to understanding the natural world. These experiences help build confidence, curiosity, and a positive sense of self as a learner.

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

+ **We are examining ways to foster creativity by giving learners agency in how they learn and communicate.** Supporting learner choice fosters creativity by letting students research as either ants or scientists, and express ideas through drawing, acting, or writing about FFA communities. These playful options deepen learning and give students greater ownership of how they connect with content.
+ **We're working to create a safe space for exploration and sharing.** Through encouraging language and thoughtful feedback design, we aim to help students feel comfortable making mistakes and offering ideas—an essential foundation for building confidence and participation. For example, rather than telling a student their claim is incorrect, we prompt critical reflection by letting them compare their response to that of a scientist. The more accurate claim appears on-screen, and the student is asked to consider how their thinking aligns or differs from the scientist they're "working" with in the investigation.
+ **We are exploring ways to support self-actualization through personal strengths.** We want learners to recognize how their own traits—like being curious, observant, or persistent—are central to scientific thinking. Helping students see their unique abilities as valuable builds stronger connections to learning and boosts self-belief.

REFLECTION

Working through the RITEC framework helped me recognize the often-invisible emotional journey that young learners go through while using digital tools. The Youth Design Team reminded me that third graders value being taken seriously but also love moments of humor and choice. Well-being isn't a side goal—it's central to learning.

> *Designing with children's well-being in mind helped me slow down and really consider how the product feels emotionally—not just cognitively—for a third grader. That shift made the whole experience better. RITEC recontextualized much of our work and sharpened our focus on creativity, safety, and self-actualization.*

LOOKING AHEAD

We're currently beta-testing the *Fungus Farming Ants* investigation in classrooms across the U.S., gathering feedback from both teachers and students to inform the next round of revisions. This collaborative testing phase helps ensure the investigation is not only educationally effective but also engaging, developmentally appropriate, and accessible. In addition to refining content and interactivity, we're actively exploring ways to integrate more well-being "checkpoints" throughout the experience—moments that invite students to pause, reflect on their thinking, receive encouragement, and emotionally connect with the material. We hope these intentional design choices will help learners feel supported and empowered as they engage with science.

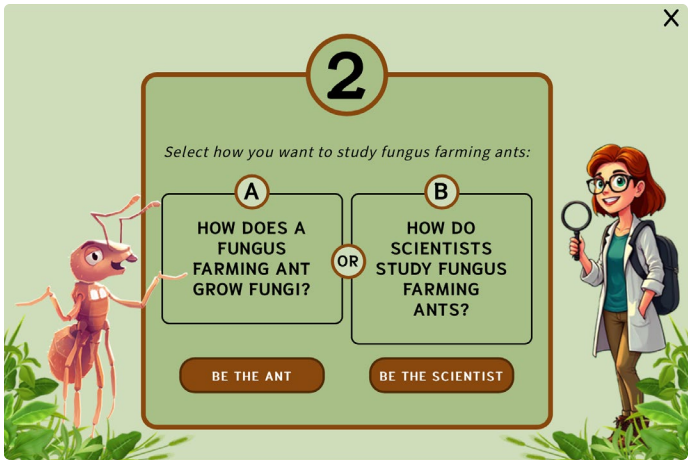
Beyond this single investigation, we're using this opportunity to apply and extend the RITEC framework to the next generation of *Research Quest* experiences. From initial concept development to late-stage revision, RITEC is now an essential guide in developing our design priorities—especially as we expand into elementary grades. Further, we are eager to use the framework as we evaluate how we can increase access for a wider range of learners by addressing diverse needs across our digital tools, content structure, and classroom supports (teacher instructional guides and student research assistant notebooks). By embedding well-being and inclusion from the start, we hope to create science learning experiences that are not only rigorous and research-informed but also joyful, meaningful, and welcoming for all children.

POTENTIAL IMPACT FOR KIDS (USERS) AND THE FIELD

+ **Designing for creativity through imaginative play supports deeper engagement and personalized learning.** By incorporating drawing, role-play, and perspective-taking into our digital experiences—like imagining life as a fungus-farming ant—we invite learners to approach science through creativity and storytelling. This kind of imaginative play fosters deeper cognitive connections and empowers kids to take ownership of their learning. For designers, this highlights the value of integrating open-ended, expressive modalities into content-driven experiences to increase emotional investment and accessibility across diverse learners.

+ **Psychological safety is a design choice—and a critical one for fostering participation.** We've learned that the tone and structure of feedback profoundly influence student confidence. Rather than flagging answers as right or wrong, we prompt students to reflect on how their thinking compares with that of a scientist. This encourages iteration and curiosity over perfection. For designers, this suggests that thoughtful language and reflection-driven feedback can turn mistakes into powerful moments of learning—and that these micro-interactions shape whether users feel safe, seen, and motivated.

+ **Designing for self-actualization strengthens learning and identity formation.** We're exploring how to help students recognize personal traits—like curiosity, persistence, and careful observation—as integral to scientific inquiry. By naming and validating these strengths in context, we're helping kids connect their sense of self to how science "works." For designers, this points to the importance of building systems that affirm users' existing capacities, not just build new skills—laying the groundwork for more inclusive, empowering learning experiences that honor a wider range of intelligence and identity.



SESAME WORKSHOP

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WELL-BEING BY DESIGN FELLOWSHIP 2025

CASE STUDY

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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.

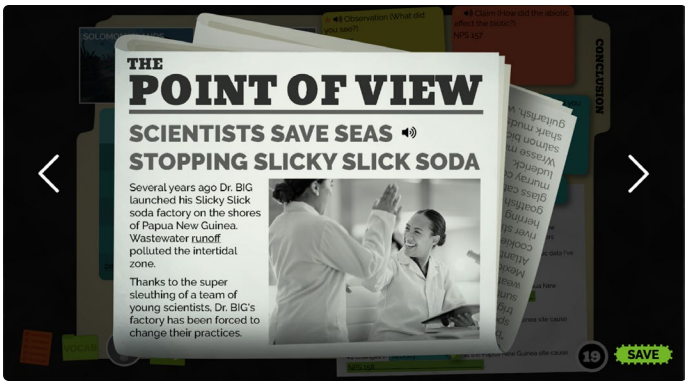
+ Improving students' feelings of **competence** by ensuring that interactions where students respond to prompts offer better feedback.

+ 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.

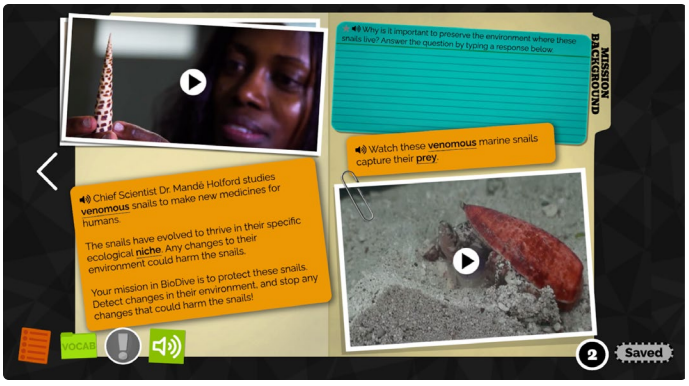
We are excited to launch the new and improved *BioDive* at the end of the 2025 school year. Our hope is to spark curiosity, build confidence, and inspire the next generation of scientists and environmental advocates.

> *The RITEC framework was made 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

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WELL-BEING BY DESIGN FELLOWSHIP 2025

CASE STUDY

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Rubin Soodak

Rubin Soodak is a creator of digital things for learning and empowerment. As an Interactive Producer at Fred Rogers Productions, he leads games and web production for the preschool series *Alma's Way* and other brands across digital platforms. He believes that good stuff for learning must listen to and trust learners, meeting them where they are in order to take them where they want to go.

PRODUCT: Upcoming web and mobile learning games from Fred Rogers Productions, with focus on three games currently in production for *Donkey Hodie* and *Alma's Way* on the PBS KIDS platform.

TARGET: *Donkey Hodie*: 3-5 years old, *Alma's Way*: 4-6 years old

→ **FREDROGERS.ORG**

Fred Rogers Productions builds on the legacy of Fred Rogers by creating quality children's media that models an enthusiasm for learning and earns the trust of parents and caregivers. We believe it is never too early for kids to discover the fun of following their curiosity, while they learn meaningful life skills along the way. Our games, websites, and apps get kids involved and make it fun for them to learn and grow.

Our games are rooted in celebrating the wonder, challenges, and possibilities of childhood. They build upon the goals of each of our shows by providing children with opportunities to practice core skills from each series. Our games cover learning domains such as flexible thinking, persistence, problem solving, self-awareness, social awareness, compassion, and more. As of May 2025, Fred Rogers Productions has produced 86 educational games that have garnered over 2.9 billion plays across web and mobile.

WHAT COMPONENTS OF WELL-BEING DOES MY PROJECT ADDRESS?

Our games are safe, equitable, and accessible. They encourage autonomy and empower players to strategize by providing opportunities to make meaningful choices during gameplay. All of our games are also playtested with a diverse pool of children across home, school, and informal learning contexts. This helps us ensure that our games are challenging but within grasp for players, helping them develop a sense of confidence as they engage with each game's subject matter. Our games also model social awareness skills and, when played with others, can provide children the opportunity to practice these skills in their own co-play experiences.

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

+ Our games can better support young children's self-discovery and identity development. We can do this by encouraging experimentation with gameplay strategies and settings, which will give our players a chance to realize their digital preferences while also encouraging them to recognize and embrace their idea of fun.

+ Our games can afford more opportunities for creativity. We can do this by providing enough structure for motivation without limiting open-ended play. Not every game needs to be on rails towards a goal; sometimes it's okay for players to skip steps, go backwards, and even try to "break" the game.

+ Our games can go beyond playtesting by embracing co-design at the start of future projects. Co-designing with our target audience can help us discover core mechanics to build around, as well as help our games better reflect the lived experiences, goals, and language of our audience.

REFLECTION

I gleaned two guiding insights from the speakers and Youth Design Partners during this fellowship. The first is that not everything needs to be made just because we see an opportune application in children's lives. Sometimes reducing harm means making and doing less, not more. The second is that good design for children's well-being is applicable to designing for everyone's well-being. In our sessions together, I found myself saying, "I struggle with that too!" or "That's just like how I feel using that technology!" I think we have an opportunity with well-being design to help everyone, not just children, navigate a world in which our most ubiquitous digital platforms are actively harmful to our well-being.

> *I think good well-being design recognizes that sometimes we need to remove things and embrace lower tech for the sake of our audience's well-being.*

LOOKING AHEAD

Fred Rogers Productions is currently working on three games for the PBS KIDS web and app platform.

The first game, for the puppet series *Donkey Hodie*, is currently in production and will be released in Summer 2025. The game will feature a new tricky puzzle each day, designed to help children ages 3-5 practice persevering through failure. The game is motivated by the mission of the *Donkey Hodie* series: empowering children to overcome the frustrations and challenges they face in their daily lives with confidence, capability, and silliness.

The second game, also for *Donkey Hodie*, is inspired by the show's recent introduction of Jeff Mouse, an avid nature lover and photographer who was born with congenital muscular dystrophy. The game will be inspired by Jeff's introductory episode, "Hee-Hee Hider Seekers," and will be informed by advisor input from Disability Belongs.

The third game, for the animated series *Alma's Way*, is currently in pre-production while Fred Rogers Productions conducts formative research with Bridge Multimedia into the game design needs and preferences of children with fine motor disabilities. This research will inform the game's design and accessibility features.

In addition to these three games, Fred Rogers Productions is exploring ways to bring more player and parent co-design sessions into our games pre-production process.

POTENTIAL IMPACT FOR KIDS (USERS) AND THE FIELD

+ Through this fellowship, I developed a newfound interest in helping children awaken their digital preferences from both a digital literacy and accessibility lens. As we continue pre-production for our upcoming *Alma's Way* game, I plan to incorporate well-being design to support our audience in this digital self-actualization. This could potentially help prepare our large audience of 4-6 year olds on the PBS KIDS platform to navigate the increasingly complex and dangerous digital world.

+ This fellowship has also had an impact on the tools I use in the early stages of our projects. For instance, I plan to incorporate the RITEC framework and Playful by Design toolkit when evaluating early concepts and designs of future games. While learning about these tools, I have also begun discussing well-being more openly with our production partners, which will lead to even more investment in and alignment towards production choices for the sake of child well-being.

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Sunny Williams

Sunny Williams is the founder of Tiny Docs, an interactive kids platform that uses animated content to teach kids about health and make a billion people smile. Formerly a lawyer, teacher, and filmmaker, he now follows his passion for storytelling and well-being. Outside of work, he enjoys improv, fitness, and relaxing with his wife, Gina, and their two dogs.

tinydocs

PRODUCT: TD Shuffle, a digital puzzle game where kids learn about health by matching colored medical objects.
TARGET: Kids age 5-8

TINYDOCS.CO

Tiny Docs is an interactive web app designed to educate kids about health in a fun and easy-to-understand language. We are on a not-so-tiny mission to improve kids' health and make a billion people smile. We have partnered with health institutions such as Lurie Children's Hospital, the American Heart Association, and Louisiana Department of Health. Our first game is *TD Shuffle*.

The inspiration for *TD Shuffle* draws from the nostalgic charm and simplicity of *Dr. Mario*, reimagined with a meaningful purpose: to educate children about health and help them manage anxiety in a fun, engaging way. Today's kids are growing up in a world where medical information—and misinformation—is everywhere, often leading to confusion or fear about their own health. We wanted to create a game that empowers young players by helping them understand basic health concepts, like how the immune system works, what germs do, and how everyday habits like handwashing and nutrition keep them strong.

At the same time, we recognize how video games can serve as a tool for emotional support. Our gameplay mechanics are intentionally soothing, designed to reward calm thinking, and promote a sense of control—two things that can be especially helpful to kids facing medical anxiety or hospital visits. By blending science-based learning with familiar puzzle mechanics and comforting visual design, the game encourages curiosity, reduces fear, and builds confidence in young players, one "virus" at a time.

WHAT COMPONENTS OF WELL-BEING DOES MY PROJECT ADDRESS?

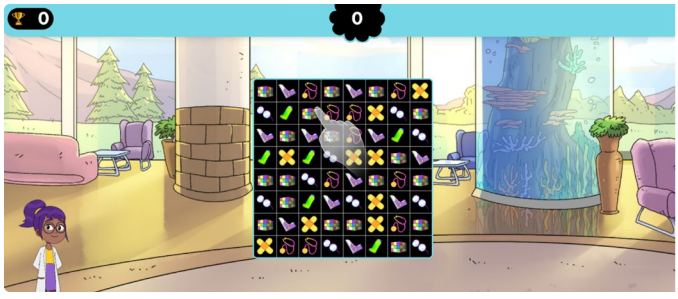
TD Shuffle highlights emotional regulation, creativity, empowerment, and social connection. *TD Shuffle* supports **emotional regulation** by providing a calming, structured environment where children can manage challenges at their own pace, reducing anxiety related to health. It fosters **creativity** through avatar creation and interactive problem-solving that encourages imaginative thinking. **Empowerment** comes from teaching kids how their bodies work and how they can take care of themselves, building confidence in their own health journey. Relationships are promoted through co-play features and shared learning experiences, encouraging collaboration among peers or with caregivers in a fun, supportive digital environment.

TD Shuffle has an opportunity to improve upon creativity, safety and security, and relationships. For **creativity**, we can add features to allow kids to use their imagination to design their own gameboard. For safety and security, we have an opportunity to add an additional layer of security with a third party safety seal to ensure parents and kids that it is a safe environment. Lastly, we can add levels of difficulty to help improve **problem-solving** skills while making children feel accomplished and competent.

> *I've learned that incorporating well-being into product design is truly a win-win. It not only creates a more meaningful and positive experience for kids, but also gives us a clear framework for building a more thoughtful, impactful product.*

REFLECTION

I've learned that incorporating well-being into product design is truly a win-win. It not only creates a more meaningful and positive experience for kids, but also gives us a clear framework for building a more thoughtful, impactful product. Feedback from the Youth Design Team was especially valuable—they found our beta version unengaging, which highlighted important areas for improvement. Their insights reminded us that prioritizing emotional and cognitive well-being isn't just a feature—it's central to making something kids genuinely connect with and delight. Designing for well-being means designing with empathy, curiosity, and a willingness to grow.



LOOKING AHEAD

Our design team is excited to begin integrating the thoughtful suggestions shared by the Youth Design Team. Their feedback provided valuable insight into how we can make *TD Shuffle* more engaging and immersive. Key ideas we plan to incorporate include introducing progressive levels to increase difficulty, using sound and music to build tension and excitement, and enhancing the user interface to improve usability and visual appeal. These changes will not only make the game more enjoyable but also align with our mission to support well-being through meaningful, user-centered design.

POTENTIAL IMPACT FOR KIDS (USERS) AND THE FIELD

+ Every piece of feedback is a data point. A single comment may be a unique user quirk—or it might reveal something worth addressing. Stay curious and keep asking questions. When critiques begin to repeat across users, that's a strong signal that something in the design needs your attention. Look for patterns.

+ The early moments of a usability test are critical. Before any tasks, questions, or feedback, you need to establish rapport and create an environment where the user feels safe, seen, and valued. Position the child as the subject matter expert and make them feel like a partner in the process.

SESAME WORKSHOP

Joan Ganz Cooney Center

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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.

Dr. Mariana Díaz-Wionczek

Dr. Mariana Díaz-Wionczek is a professor of psychology, children's media advisor, and executive producer who creates meaningful, culturally grounded content for young audiences. As principal of MDW Consulting, she partners with organizations like PBS Kids, Sesame Workshop, and Fred Rogers Productions to design innovative, research-informed media that supports children's learning, development, and sense of identity across languages, cultures, and lived experiences.

Brittany Sommer Katzin, Ed.M.

Brittany Sommer Katzin, Ed.M. has a background in child development and psychology from Tufts and Harvard and creates educational media experiences for children and families. Her work with clients including Sparkler Learning, Noggin, Fred Rogers Productions, and Sesame Workshop focuses on social-emotional learning, social justice, family engagement, and product development to empower families and support early childhood development.

PRODUCT: The Marshmallow Project is creating a screenless physical toy for children ages 4-7, that will immerse them in interactive learning experiences associated with whole-child development. To safely empower children and challenge them to explore their interests and build their capabilities, this toy will use AI for the purposes of adaptivity and customization.

MARSHMALLOW.KIDS

Children today spend a significant portion of their day on screens—on average, 3.5 hours daily for children ages 5 to 8, and over two hours daily for 2- to 4-year-olds. While screens can support learning and entertainment, many parents (75–80%) express concern about excessive screen use and its potential impact on children's development (Common Sense Media, 2025). Furthermore, schools around the world are struggling to help students keep up in reading and math, with declining Programme for International Student Assessment (PISA) results in developed countries showing a significant drop in young students' proficiency (World Economic Forum, 2023). With children falling behind, many families are looking for new ways to help them learn outside the classroom.

HOW WE INCORPORATE WELL-BEING NOW

Through this fellowship, our focus has shifted from thinking of **safety** "not only [as] the absence of harm, but also [as] creating additional positive value" (UNICEF Innocenti, 2022). We began to focus on how the prosocial and positive tenets of our product could come to life in ways that foster well-being and allow children to flourish. Rather than solely preventing potential harm, we broadened our lens to think more about things like building children's sense of autonomy and competence; indulging and deepening their creativity; and ensuring they are exploring their identity in healthy ways.

+ The experience nurtures **competence** by adapting research-based activities to each child's abilities. The experience includes elements to ensure children feel motivated and confident as they face challenges.

+ The toy nurtures **creativity** by inviting children to imagine different worlds and universes. Through scaffolded interactions, kids contribute ideas and exercise agency. AI technology helps to make each experience dynamic and personalized, which is something that is difficult to achieve in traditional toys.

+ The toy nurtures **identity** by offering experiences where children can express preferences, explore the depths of their own imaginations and "try on" identities. Personalization, effort-based praise, and adaptive AI help to foster self-worth, agency, and belonging.

WHAT MORE CAN OUR PRODUCT DO TO ADDRESS CHILDREN'S WELL-BEING?

+ We are exploring using databases of children's voices to train the AI to understand nuances of children's speech so that we can more accurately understand a variety of speech patterns, styles, and voices (in turn, reflecting **diversity and inclusion**). Furthermore, we are in the process of collaborating with writers of diverse backgrounds to ensure the adventures reflect children's lived experiences and also serve as a window into the lives of others, with characters from a variety of cultures and walks of life.

+ We will prioritize child **safety** and data security at every level of the toy's design. We plan to use firmware signing, encrypted storage, and mutual system authentication, while limiting external connections to secure, local ones. We will also follow strict data minimization practices and ensure that all AI interactions are age-appropriate, constructive, and designed to redirect children to a caregiver if needed.

+ We will explore ways that we can boost children's **competence** through expanding the scaffolding built into the stories and activities and responding to children's ideas and answers in real-time. We will test features like layered hints, encouraging character prompts, and confidence-building feedback that meet children where they are and gently help them grow.

> *We want to empower children through a tool for creative expression, perspective-taking, and informal learning—one that sparks joy and imagination and builds confidence with every play session.*

LOOKING AHEAD

The fellowship gave access to experts who taught us ways to measure the success of child and family well-being in our product. Equally important, we spoke to members of the Youth Design Team (YDT), who are experts at being kids. As they offered ideas and feedback, and ultimately helped decide our final toy design, we were reminded of the importance of connecting with our users to test and co-design to create experiences that satisfy their needs and desires. As we continue development, we will prioritize user testing with diverse children and families to better understand how kids engage with the toy across cultural and linguistic contexts to make the toy inclusive of a broad range of users. By listening closely to families and iterating with intention, we aim to create an experience that reflects the richness of childhood—across languages, cultures, abilities, and identities.

POTENTIAL IMPACT

Our design approach revolutionizes how adaptive, voice-driven interactivity can unlock rich learning experiences, and offers a model for designers seeking to build creative, personalized learning tools.

+ The toy encourages imagination, flexible thinking, and playful exploration. By shaping narratives through their voices and choices, kids engage in creative experiences. The AI will personalize each interaction, offering dynamic scaffolding that adapts to each child's ability.

+ The toy can have a large potential impact on children's discovery and growth, building their self-worth and agency as they choose story experiences aligned with their interests. Through its commitment to accessibility, ethical AI, and diverse voices, the product offers a replicable framework for inclusive design—encouraging others in the field to consider identity, equity, and representation as core pillars of innovation.

REFLECTION

Ultimately, our goal is to deliver more than a toy. We want to empower children through a tool for creative expression, perspective-taking, and informal learning—one that sparks joy and imagination and builds confidence with every play session. As we continue building the toy, our commitment remains rooted in designing with intention, fostering well-being, and utilizing evidence-based practices to meet children where they are and have a meaningful impact on their development. By combining the power of generative AI with storytelling, we aim to foster children's well-being in real, measurable ways, while helping parents support their children's learning outside the classroom. We hope to contribute not just to playful learning, but to a more human-centered future for children's technology.

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Stephanie Ojo

Stephanie is a Staff Product Designer at Pinterest, specializing in Trust and Safety and teen experiences. Previously, she led design for YouTube's Supervised Experience and contributed to Google Search and Amazon Echo Frames. A self-published children's book author, Stephanie is passionate about empowering youth through safe, engaging design and believes in the power of storytelling to drive positive change.

Pinterest

PRODUCT: Pinterest, bring everyone the inspiration to create a life they love

TARGET: Everyone—but for this project, teens 13-17

→ **PINTEREST.COM**

Pinterest's mission is to bring everyone the inspiration to create a life they love—and when we say everyone, we truly mean it. People come to Pinterest not just to dream, but to find real ways to bring those dreams to life. We are committed to being a positive corner of the internet; and our company leaders have emphasized this commitment publicly, making it clear that Pinterest stands apart by prioritizing user well-being and positivity. Pressure to perform is everywhere on social media. Eight in ten teens feel pressure to look their best or present themselves in a certain way online (New Survey Shows Young People Are Under Pressure About Their Achievement, Appearance, and Future, 2024). Pinterest can create a safer, more private space for young people to grow and explore interests. With Gen Z as our fastest-growing user group (*Pinterest analysis, global, Jun 2023*), it's more important than ever to understand how teens use Pinterest.

As Pinterest becomes more integral to teen culture, we have a unique opportunity—and responsibility—to create an online environment that is trustworthy, expressive, and trend-forward, while meeting teen's developmental needs. We're moving beyond simply designing out the bad; we're actively seeking opportunities to design thoughtful experiences that amplify the good. By focusing on both safety and inspiration, we aim to empower the next generation to explore, create, and thrive in a space built for positivity and growth.

RITEC COMPONENTS PINTEREST CURRENTLY INCORPORATES WELL

Safety & Security

Pinterest prioritizes the well-being of teens by embedding safety and security into every aspect of their experience. Accounts for users aged 13-15 are private and can't be changed. Only the (13-15 year old) teens and people they invite to follow them can see their saved Pins and boards. Their Pinterest account and profile details, like their name, age, or location, won't be discoverable and they can only exchange messages with mutual followers. Accounts for teens aged 16-17 years are private by default, but these teens can change their profile visibility in settings. We also offer a parental passcode that can be set to ensure parent visibility and supervision of settings controls. By minimizing negative interactions and exposure to harmful content, Pinterest empowers teens to explore their interests, express themselves, and connect with others in a positive, supportive, and more secure environment.

Inclusive Experiences

Pinterest's body type ranges, skin tone filter and hair texture filters deliver better and more inclusive search results so that broader ranges of people can feel seen on the platform. Given that Pinterest offers powerful visual search tools, it is important for users to be able to see themselves reflected in their search results. This is incredibly vital for teens as they are forming their own identities and balancing societal pressure.

Creativity

Pinterest nurtures teen creativity by providing a vibrant, visual platform where self-expression and exploration are encouraged. Teens can discover new ideas, play around with new ways of creating (collages), experiment with trends, and share their own projects in a supportive and more positive environment. By prioritizing positive content and community guidelines, we help teens feel more safe to express themselves authentically, and develop their creative skills as they shape their unique identities.

RITEC COMPONENTS PINTEREST CAN AMPLIFY TO BETTER ADDRESS CHILDREN'S WELLBEING

Relationships

The teens in our co-creation session with the Youth Design Team already viewed Pinterest as a creative and safe space, but found its social features (and teen account limitations) restrictive and connecting with peers complicated. One Youth Design Team member said, "I genuinely forget that Pinterest is used as an actual social media platform." While they appreciate the platform's safety, these teens also desired more social interaction. By introducing safer, but still social experiences, Pinterest can better engage teens and highlight the value of collaborative community in co-creating a life you love.

Competence

There's a clear need for better education on privacy, content guidelines, and account changes for everyone on Pinterest. By being more transparent and proactive in our in-product education, we can reduce the frustration that stems from uncertainty and empower teens to make confident and informed decisions about their accounts. In addition to in-product contextual education, we can also encourage skill development and real life action for teens by offering more video tutorials and DIY content, helping them turn inspiration into action, beyond just shopping.

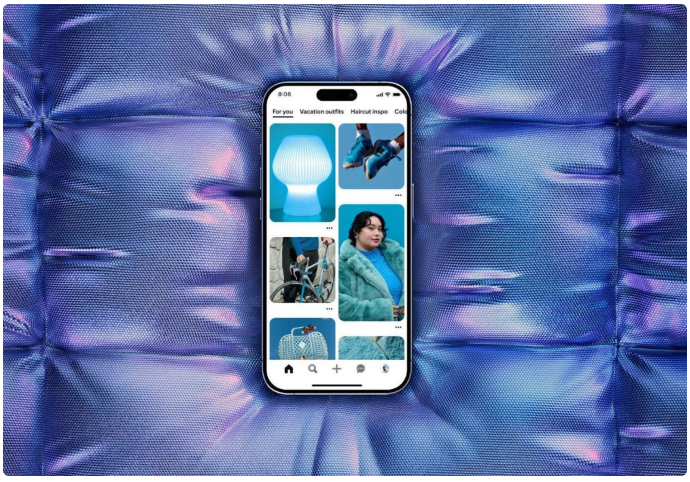
Autonomy/Empowerment

Visual discovery on Pinterest is often a joyful, creative experience, given our algorithm that offers related Pins. But not all content is inspiring. Pinterest can address this by taking a thoughtful and more nuanced approach to our search interventions and offering supportive resources, guidance and gentle pivots when needed. By minimizing dead ends and promoting agency, we can empower teens to make positive choices, fostering a safer and more growth-oriented experience as they explore their interests on the platform.

REFLECTION

Throughout the fellowship, I was reminded of the value of co-design and consistently talking with young people, especially when focusing on youth well-being. While adults have many great ideas, a lot has changed since we were teens and it's important to hear and truly listen to what young people tell us about their experiences and needs. I was taken aback when a Youth Design Team member shared, "*I was surprised that all of the adults in the room were listening deeply to our thoughts and ideas. At some times I would think my ideas were silly or not on par but they always asked more about my thoughts and it made me feel seen.*" Not only does this illuminate the importance of active listening during co-design, but also the impact our interactions with youth can have. If we want them to join Pinterest, explore and grow for years to come, it is crucial that they feel seen and a part of our process.

> *Throughout the fellowship, I was reminded of the value of co-design and consistently talking with young people, especially when focusing on youth well-being*



LOOKING AHEAD

In the coming months I plan to share more about my learnings, the RITEC framework, and youth well-being with various groups across Pinterest, such as our well-being working group and teen safety cross functional partners. I will also plan a Lunch & Learn workshop where anyone interested can learn more about the fellowship, designing for youth well-being, and the RITEC framework. I'll continue to incorporate my learnings into the prioritization of ideas represented in our teen experience product vision.

I am confident that Pinterest can be an innovative leader in creating an online space for teens that is more safe, empowering and feels "made for them"—We'll do this by continuing to talk with teens, listen to their needs and feedback and thoughtfully weave their insights into our design solutions.

I encourage all designers interested in driving positive outcomes for youth well-being, to think beyond just capturing the attention of young people and focus on amplifying their intention. The result → a sense of fulfillment and time well spent.

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