

Science meets play: ASU researcher makes developmental science hands-on for families

City of Tempe's Free Art Friday events collaborate with psychology team on creative play for young children

By Laura Fields, ASU News

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On a Friday morning at the [Edna Vihel Arts Center](#) in Tempe, toddlers dip paint brushes into bright colors, decorating paper fish. Nearby, children chase bubbles and move to music, while preschoolers experiment with static electricity, giggling as charged rulers make paper fish dance across the table.

Among them, postdoctoral research scholar [Julie Vaisarova](#) and a team of graduate and undergraduate researchers from Arizona State University kneel beside the children, engaging them in the activity. They encourage the preschoolers to observe what happens when a ruler, rubbed against a piece of fabric, hovers over the paper fish.

To the children, it's play. To the researchers, it's a glimpse into how young minds explore the world.

Vaisarova, who studies early cognitive development in ASU's [Department of Psychology](#), a unit within [The College of Liberal Arts and Sciences](#), was recently named a 2025 ASU Catalyst Award winner for her commitment to inclusive, community-driven research.

Since joining ASU in August 2022, Vaisarova has worked in Assistant Professor [Kelsey Lucca](#)'s [Emerging Minds Lab](#), where she has become a leader in student mentorship and community engagement. She spearheads the [Emerging Scholars Paid Summer Internship Program](#) and collaborates with the city of Tempe to integrate developmental science into [Free Art Friday](#) events.

Where art and science meet

Free Art Friday blends science and creativity through a collaboration between the Emerging Minds Lab and the [Learning and Development Lab](#), led by Assistant Professor [Viridiana Benitez](#).

Together, the two labs form the [Early Childhood Cognition Research Group](#), uniting researchers with a shared interest in how children learn, communicate and explore the world.

“There is creativity in science, and the Early Childhood Cognition Research Group showcases that so well,” said Stephanie Self, community arts specialist with Tempe Arts & Culture.

The research group carefully tailors activities to each month's theme.

At the most recent “Under the Sea” event, they used bubbles and static electricity to illustrate curiosity-driven learning. During the holidays, they guided children in making gingerbread dough while explaining how sensory experiences support cognitive development.

By embedding developmental science into creative play, the team demonstrates how curiosity fuels learning from infancy.

“A lot of the research we do is about understanding how kids drive their own learning through what they choose to engage with,” Vaisarova said. “We try to plan activities that show families how important that type of hands-on exploration is.”

Vaisarova has been working with teaching artists at Tempe Arts & Culture, leading workshops about how cognitive, linguistic, social-emotional and physical development connects to their [classroom activities](#). As a result, teaching artists can more intentionally plan for the age groups they work with, including babies as young as 6 months.

“I’ve seen the biggest impact in the way we communicate with the grown-ups who are with the kids,” Self said. “Now, when we talk about an art project, we can also explain the science behind it, whether it’s object permanence or sensory development. Giving parents that information helps them see how the arts are actually helping their child develop.”

Get involved

The Early Childhood Cognition Research Group at ASU studies how babies and young children learn about the world.

Families who [sign up](#) will be contacted about upcoming research opportunities.

Participation is interactive, child-friendly and designed to fit your schedule. Your involvement helps researchers better understand early learning and development.

Mentoring young scholars

Vaisarova is as passionate about mentoring students as she is about engaging families. As the director of the Emerging Scholars Summer Internship Program, she's opening doors for undergraduates who might not otherwise have access to research opportunities.

The two-summer internship provides hands-on experience in developmental psychology research, including mentorship training so interns can guide other students. Vaisarova also implemented a holistic application process, with the goal of minimizing any financial or systemic barriers that might prevent students from participating.

Lucca — who received an [NSF CAREER award](#) to support these kinds of synergistic activities between research, outreach and teaching — nominated Vaisarova for the Catalyst Award and has seen the ripple effect of her mentorship.

“So many of our students want to go to graduate school, and they say that Julie not only got them excited about science but helped them believe in themselves,” Lucca said. “They come into my office presenting data with confidence, and that’s because of her.”

The collaboration between the lab and Free Art Friday grew out of the Emerging Scholars Program, sparked by the recruitment efforts of its first intern, Natalia Gonzalez.

“I spent hours researching and emailing organizations,” said Gonzalez, now a graduate student studying [program evaluation and data analytics](#) at ASU. “I was thrilled to see a response from Free Art Friday, but panic set in as I realized I had no idea what to do next.”

Vaisarova guided Gonzales through the process, helping her draft an email and set up an initial meeting.

“She became the primary spokesperson but ensured I was involved every step of the way, teaching me the value of collaboration,” Gonzalez said.

Fostering these kinds of opportunities, where research, mentorship and community engagement intersect, is just as important to Vaisarova as the research itself.

“In academic spaces, the time and energy needed for this type of work can easily slip onto the back burner relative to peer-reviewed publications. I'm so grateful to be part of a campus community that recognizes and values it,” Vaisarova said.

An invitation to play and learn

Next up for the Emerging Minds Lab is a longitudinal study examining how curiosity develops in young children and its role in early STEM readiness.

The study will follow children from 12 months to nearly 3 years old, tracking how they use curiosity to gather information and explore their environment. Participating families are compensated for their time and receive a “passport” for their child, so caregivers can track and watch their development.

Recognizing that visiting a university lab can be a challenge for many families, the team is working with Free Art Friday to make it a research participant testing site.

“Coming to campus can be intimidating and logistically challenging, especially during the school day,” Vaisarova said. “By offering community-based research opportunities, we’re making it easier for families to participate.”

The next Free Art Friday is scheduled for April 11. The event will return in the fall, with sessions planned for October, November and December, and will resume in the spring beginning in February.

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This story originally appeared on [ASU News](#).

Main image



Postdoctoral research scholar Julie Vaisarova engages kids in developmental science research during Free Art Friday. Photo courtesy of Haute Media/Billy Hardiman and Tempe Arts & Culture

Gallery



Members of the Early Childhood Cognition Research Group get ready for a recent Free Art Friday. From left: Jillian Kuo (master's student, Learning and Development Lab), Natalia Gonzalez (graduate student, Emerging Minds Lab), Aryan Bellani (undergraduate student, Learning and Development Lab) and Ye Li (doctoral student, Learning and Development Lab).



Emerging Minds Lab doctoral student Elise Mahaffey prepares to tell families about research opportunities with the Early Childhood Cognition Research Group.



Assistant Professor Kelsey Lucca (off camera to the left) and her 9-month-old son explore what kinds of materials generate static electricity with Emerging Minds Lab doctoral student Nayen Lee.



Behind the scenes of Free Art Friday, members of the Early Childhood Cognition Research Group prepare baking soda "dinosaur eggs" for children to explore.