

Welcome!

NGCP National Webinar:

Families and STEAM: Strengthening Relationships and Building Partnerships

Please respond to the poll on your screen.



National Girls
Collaborative Project



Families and STEAM: Strengthening Relationships and Building Partnerships

April 6, 2022



NGCP Vision

The vision of the National Girls Collaborative Project is to **support and create STEM experiences that are as diverse as the world we live in.**



Our Goals

Connect + Create + Collaborate

1

Maximize access

to shared resources within projects, and with public and private sector organizations and institutions.

2

Strengthen capacity

of existing and evolving projects by sharing exemplary practice, research, and program models, outcomes, and products.

3

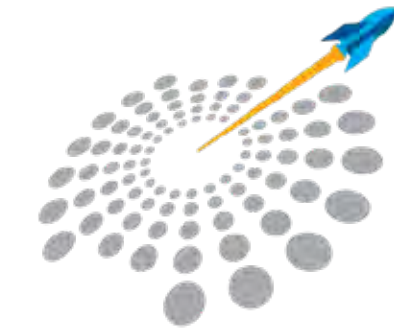
Create the tipping point

for gender equity in STEM by using the leverage of a network and the collaboration of individual girl-serving STEM programs.



NGCP Activities

- Network Partnerships
- IF/THEN Collection
- The Connector
- FabFems
- National Webinars

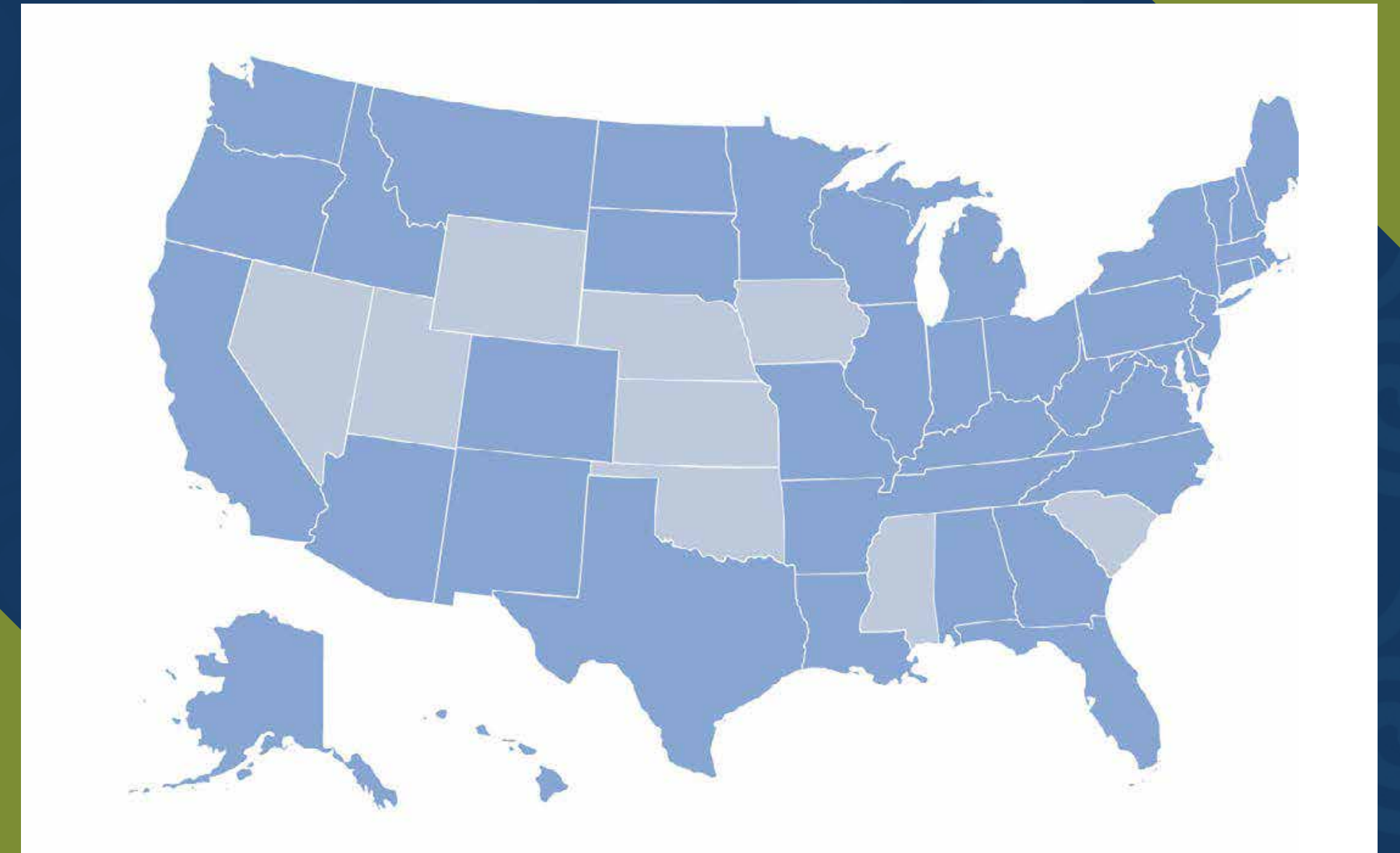


MILLION GIRLS MOONSHOT



A National Network Of Collaborative Teams

- NGCP programs and partners are in every state
- With 33 Collaboratives that support 41 states
- Together, we facilitate collaboration across 42,500 organizations
- Serving 20.2 million girls and 10 million boys



Speakers



Linda Kekelis

Family Engagement Advisor,
STEM Next



Delia Meza

Director of Family Learning and
Community Partnerships,
The New York Hall of Science



Smirla Ramos-Montañez

Family STEM Learning Researcher,
TERC

Family Engagement: Closing the Opportunity Gap

Strategies to transform programs, professional development, and research



Photo credit: Family Code Night

About me

Linda Kekelis:

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How can we reimagine family engagement?

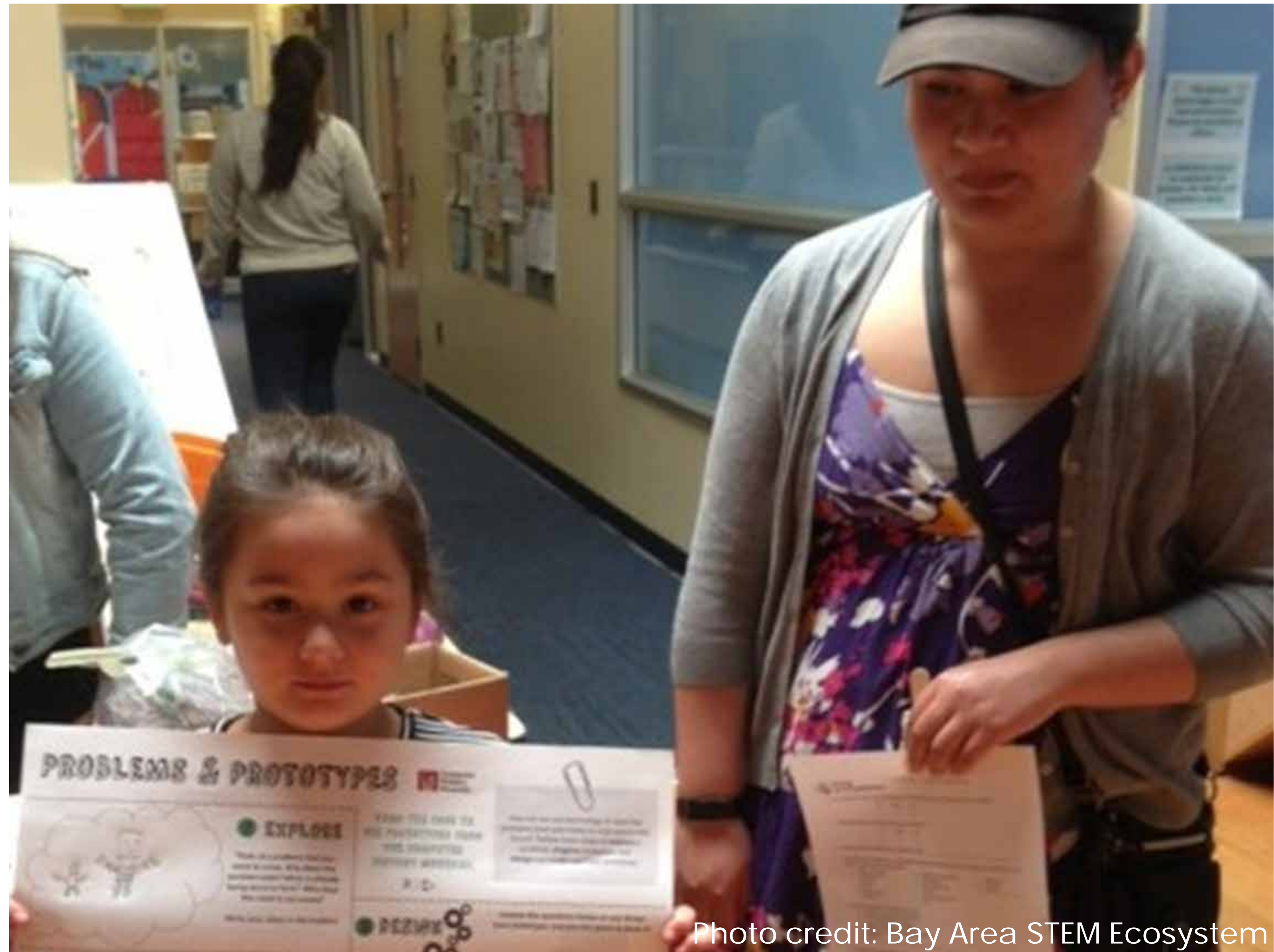


Photo credit: Bay Area STEM Ecosystem

How can we
prioritize equity?



Photo credit: Techbridge Girls

Where can we go with family engagement?



Unleash Your
GIRL POWER!

Virtual Family
STEAM Night
March 17
5:30-6:30 PM

Registration:
https://tinyurl.com/FSN_girlpower

WOMEN @PIXAR PIXWIT Sandia National Laboratories Scientific Adventures for Girls
Changing the Face of Science

How can we reimagine resources in support of family engagement?



Photo credit: Techbridge Girls

Family Engagement

Our Community of Practice is our Superpower

Resources for Family Engagement

Tools and Books	Articles and Blogs	Webinars and Videos	White Papers and Research
<p><u>STEM Family Engagement: A Planning Tool</u> by Institute for the Study of Resilience in Youth</p> <p><u>Challenging Assumptions Reflection Tool</u> by Flamboyant Foundation</p> <p>Powerful Partnerships by Karen Mapp, Ilene Carver, & Jessica Lander</p> <p>Engage Every Family (Second Edition) by Steven Constantino</p>	<p><u>Listening: The “Secret Sauce” for Impactful Family Engagement</u> by STEM Next</p> <p><u>Family Engagement Reimagined</u> by Mahnaz Charania for Christensen Institute</p> <p><u>Supporting Families and COVID-19: We’ve Got to Get This Right</u> by STEM Next</p> <p><u>New Study Confirms Benefits of Connecting Parents with Each Other to Build Social Capital</u> by Global Family Research Project</p>	<p><u>Family Engagement Phone Calls: A Tool for Powerful Practice</u> by Dr. Karen Mapp and Scholastic Education</p> <p><u>Multigenerational Tinkering</u> by Exploratorium’s <u>Tinkering Together Festival</u></p> <p><u>Listen, Learn, Lead webinar: Voices from our Schools</u> by Flamboyant Foundation</p> <p><u>The Power of Our Words</u> by Dr. Steve Constantino and Patricia Weinzapfel</p>	<p><u>Funders’ Playbook: Tools for Thinking About Family and Community Engagement</u> by Carnegie Corporation of New York</p> <p><u>Changing the Game in STEM with Family Engagement: A White Paper for Field Leaders and Practitioners to Empower Families in STEM</u> by Linda Kekelis and Kara Sammet for STEM Next</p> <p><u>The Essential Funders' Guide To STEM-focused Family Engagement</u> by Kathleen Traphagen, Kara Sammet , & Linda Kekelis for STEM Next</p> <p><u>Embracing a New Normal: Toward a More Liberatory Approach to Family Engagement</u> by Karen Mapp and Eyal Bergman, for Carnegie Corporation of New York</p>



DESIGN MAKE PLAY • New York Hall of Science



Family Engagement Programming

- Little Makers Studio
- Science Playdates for Neurodiverse Students



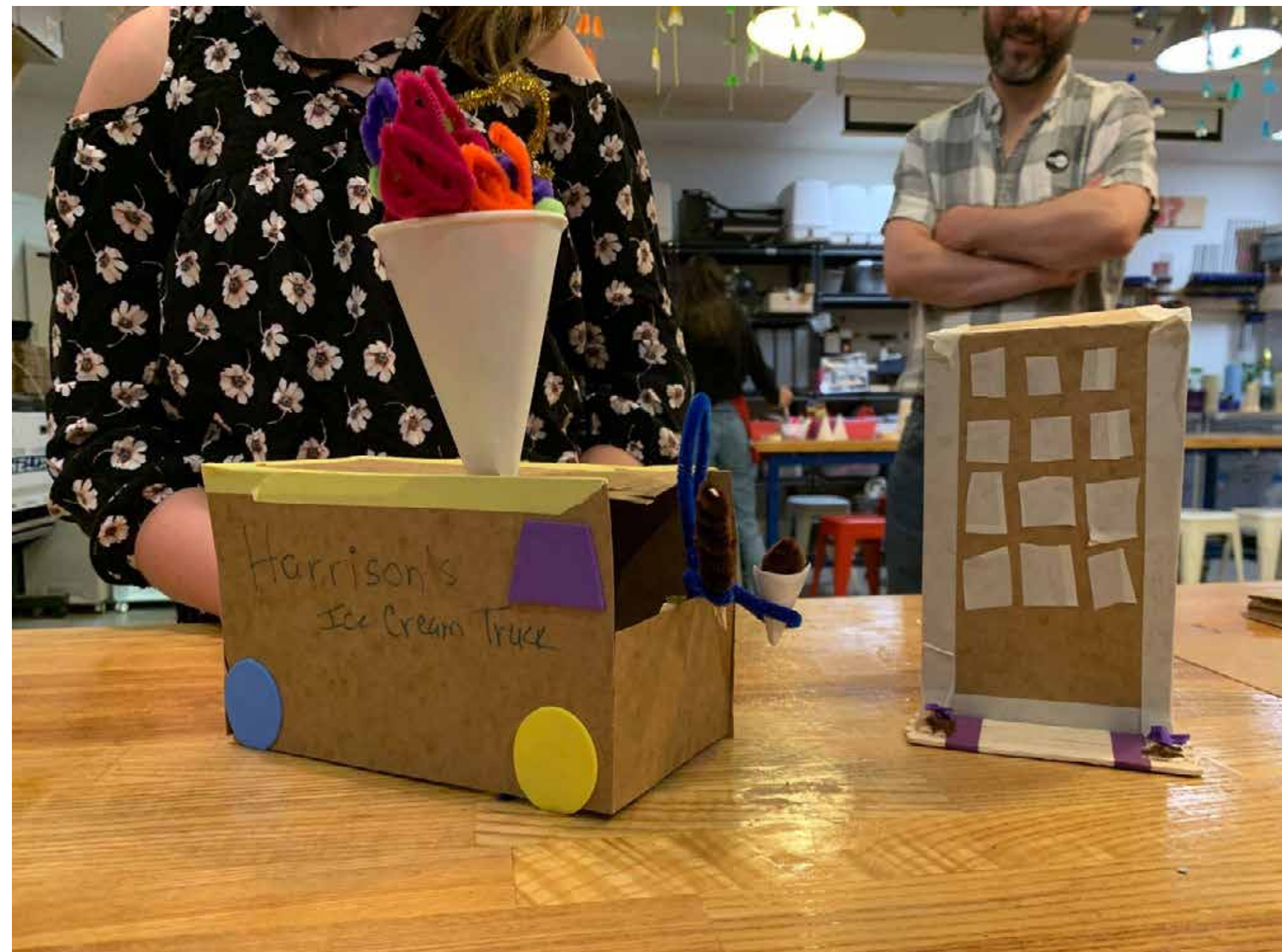
Empower Parents

- Engaging Parents as Child's First Science Teacher
- Engaging Parents as Playmates



Materials Literacy

- Using Everyday Materials
- Tinkering with Materials



Multigenerational Learning

- Family STEM Learning
- Co-learning between Caretaker and Child
- Create Shared Experience



Culturally Relevant Experiences

Tortilla Maker

- Familiar Tool
- Honor the Diversity in the Group
- See themselves as STEM Learners and Doers



Culturally Relevant Experiences

Tortilla Fiesta!

- Building Authentic Relationships
- Empower Parents
- Feeling of Engagement
- Mutual Trust
- Sense of Community



The New York Hall of Science



Delia Meza

Director of Family Learning
and Community Partnerships

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Learning with Families about STEM

Presentation for National Girls Collaborative Project

Smirla Ramos Montañez

Family STEM Researcher at TERC

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Acknowledgements

The work presented today is part of multiple NSF-funded initiatives including the Head Start on Engineering and the REACH-ECE projects. I am grateful to have the opportunity to be part of a dedicated research team that cares deeply about families and strives to collaborate and learn from families about how we can support interest and engagement with STEM. I want to particularly acknowledge the contributions and leadership of Dr. Scott Pattison (TERC), Dr. Gina Svarovsky (Notre Dame University), our community partners Mt. Hood Community College and Metropolitan Family Service.

Principles Guiding our Collaborative Research with Families

Family learning is unique.

Family-based experiences outside of school are important and a primary learning context for young children.



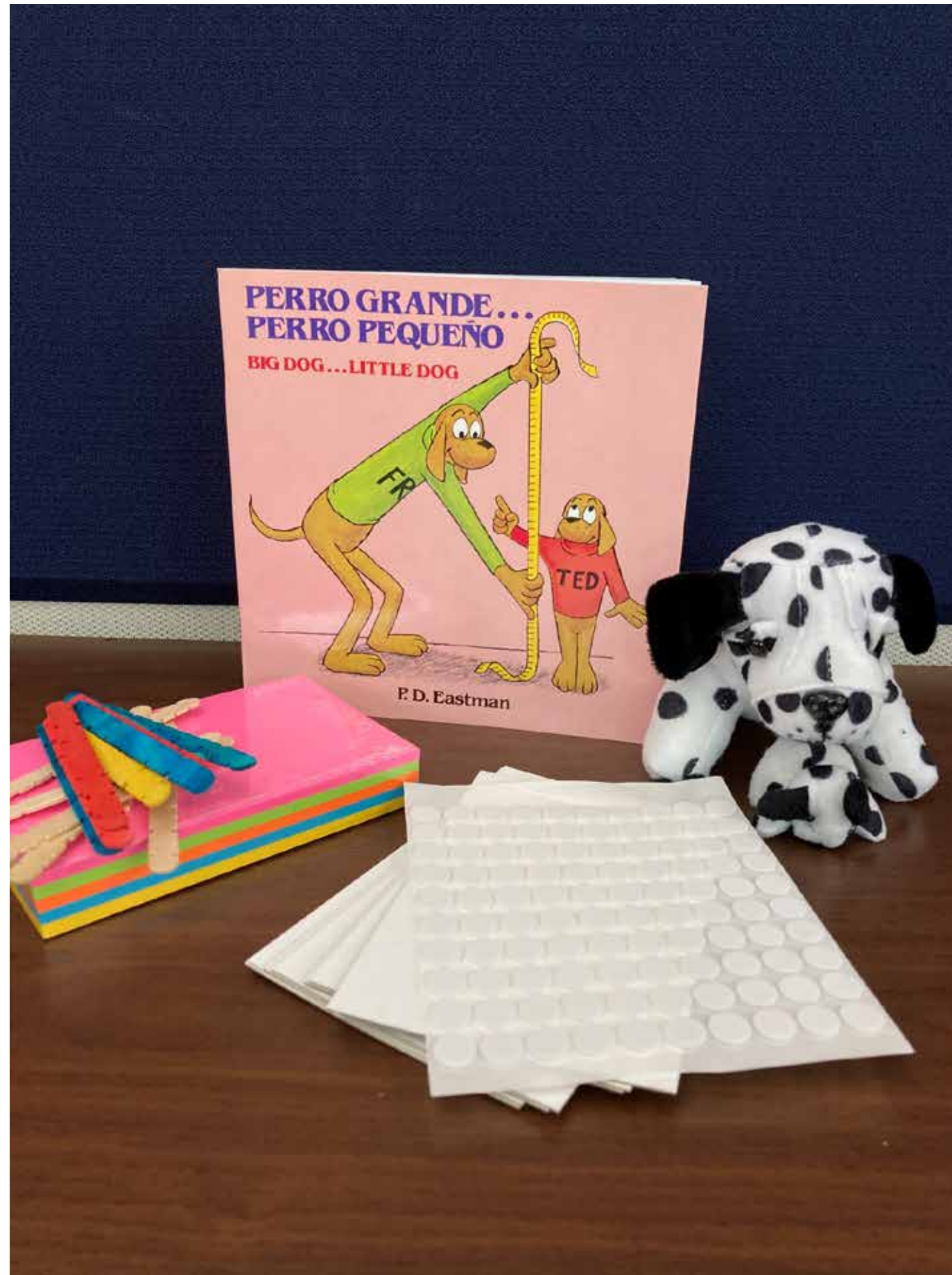
Principles Guiding our Collaborative Research with Families

- Families engage with STEM in rich ways at home and in other informal learning settings.
- Families have a wealth of existing knowledge and expertise to bring to these experiences.
- Educators and researchers are learners and collaborators with parents.

Learning with Families about STEM

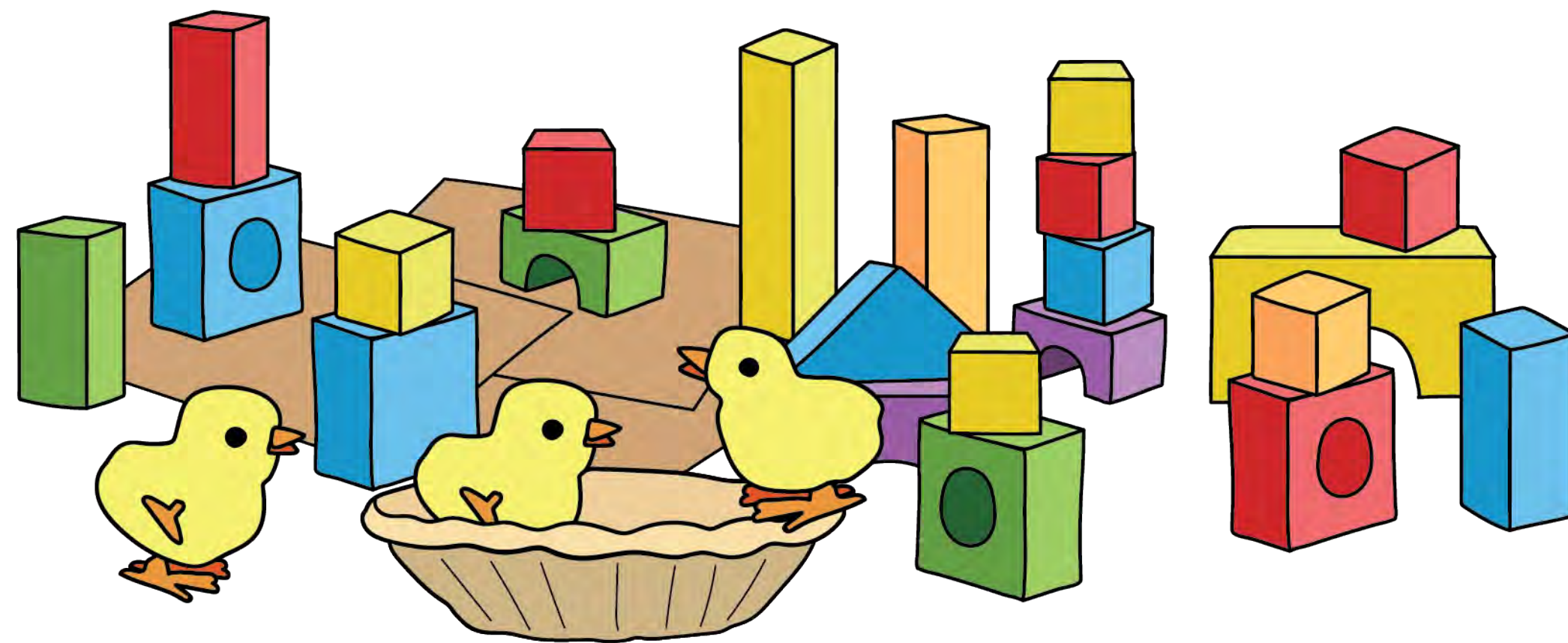


Family Engineering Activities



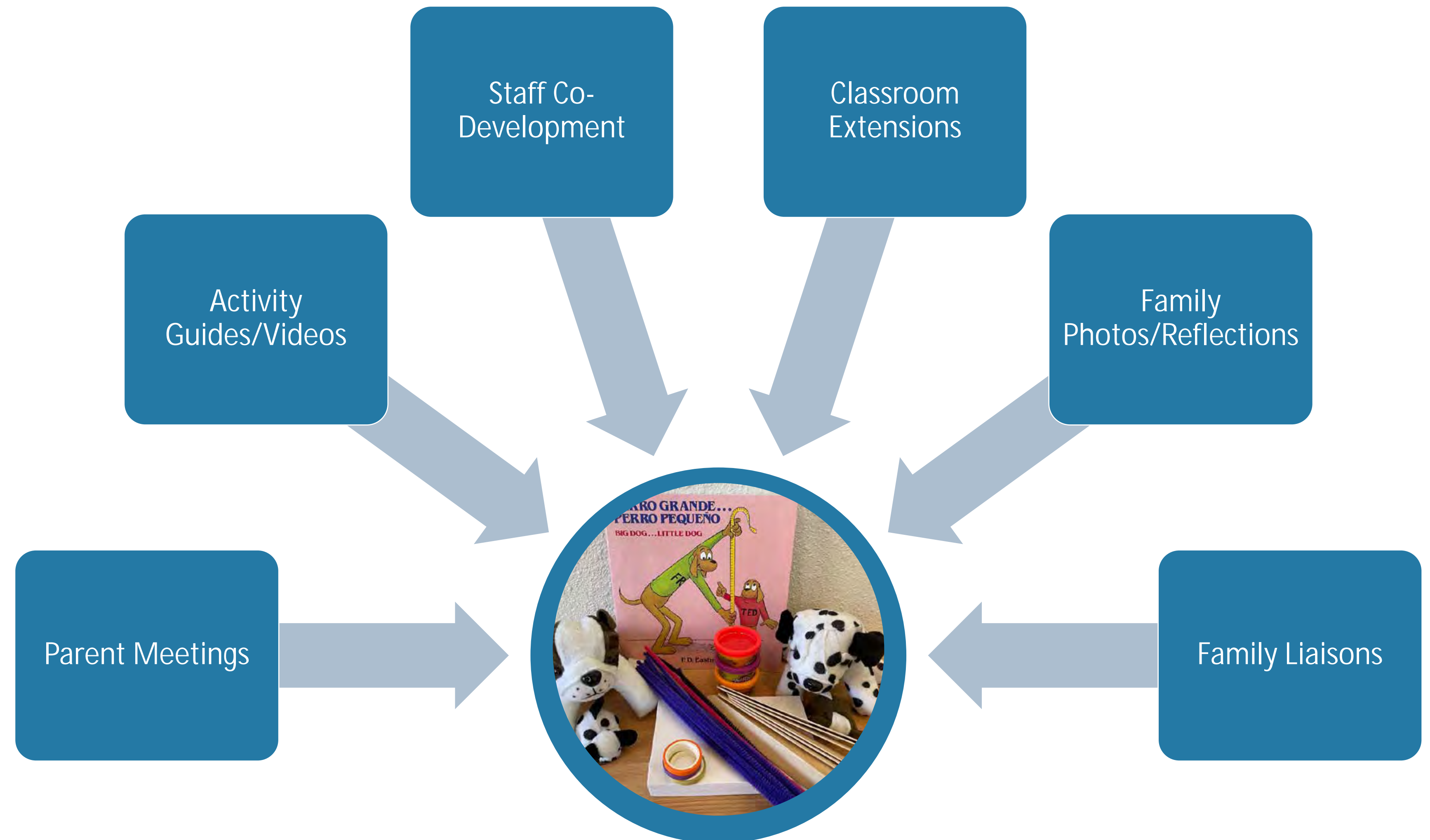
REACH-ECE

How do the specific elements and design characteristics of family-based engineering activities support, or not, engineering engagement and design practices for children and families?



Head Start on Engineering Program

How can we understand, and support interest development related to science and engineering in early childhood?



The goal should not be to identify what families don't know or try to fill gaps. The goal is to elevate the knowledge and practices that are already present and co-build on these to meet family goals.

Q & A

We'll take questions from the chat and from people using the 'hand raise' function.



In the chat...

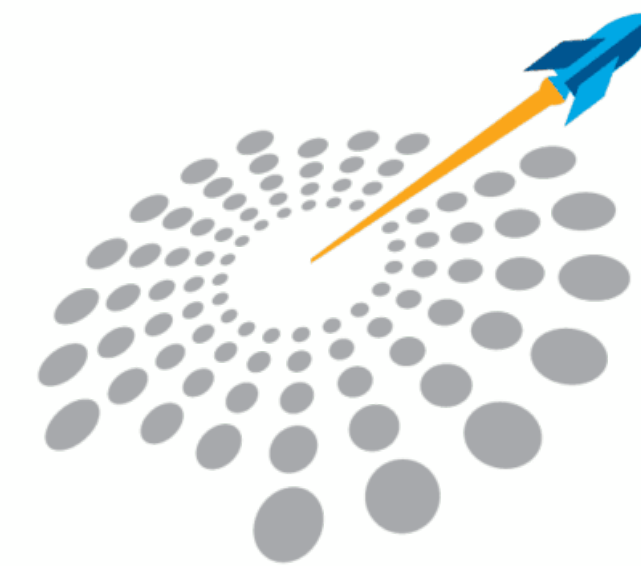
Write 1 thing you will do after this webinar to support family engagement, relationships, and partnership in your work.



Upcoming NGCP Events

The M in STEM: Math in Everyday Life

April 20, 2022 at 11:00 AM Pacific / 2:00 PM Eastern



MILLION GIRLS MOONSHOT



Girls STEAM Ahead with NASA Free Resources

May 3, 2022 at 11:00 AM Pacific / 2:00 PM Eastern





20 YEARS OF TRANSFORMING STEM

Learn more at ngcproject.org