

Partnerships and programs to broaden participation in STEM: Insights for action from NASA's SciAct program

May 1 | 10:30am-5:30pm Tournament Hall B

GOALS

- 1. Meet members of other ecosystems and share and learn with them throughout the design session.
- 2. **Strengthen your understanding of DEAIB** (diversity, equity, inclusion, accessibility and belonging) and the ways that these concepts apply to STEM learning ecosystems.
- 3. Learn about, discuss, and apply findings from a study of four learning ecosystems designed to broaden participation in STEM.
- 4. Outline a plan of action to apply or implement these ideas when you return home.

PRESENTERS

Allison Anderson, Museum of Science, aanderson@mos.org Ann Atwood, Museum of Science, aatwood@mos.org Molly Auclair, Gulf of Maine Research Institute, mauclair@gmri.org Christi Buffington, University of Alaska Fairbanks, cbuffington@alaska.edu Matt Cass, Southwestern Community College, mcass@southwesterncc.edu Ali Jackson, Sciencenter, ajackson@sciencenter.org Liz Kollmann, Museum of Science, ekollmann@mos.org Kal Mannis, Arizona Science Center, mannisk@azscience.org Paul Martin, Arizona State University, paulmartin@asu.edu Randi Neff, Southwestern Community College, r_neff@southwesterncc.edu Rae Ostman, Arizona State University, rostman@asu.edu Leigh Peake, Gulf of Maine Research Institute, lpeake@gmri.org Elena Sparrow, University of Alaska Fairbanks, ebsparrow@alaska.edu Sarah VanDenbergh, Gulf of Maine Research Institute, svandenbergh@gmri.org

AGENDA

Part 1 - 10:30am-11:45am

Learn and share **characteristics of STEM learning ecosystems** designed to broaden participation.

10:30am	Welcome and introductions
	 Review goals, schedule, and session materials
	Introductions
10:55am	Characteristics of learning ecosystems
	Large group discussion
	• Presentation of key finding: STEM learning ecosystems are intentional
	partnerships for lifelong learning and engagement, which are grounded in strong
	community <u>relationships</u> and are <u>responsive</u> to their context.
	 Introduction to presenter ecosystems
	Small group activity: Draw your ecosystem
11:40am	Preview afternoon activities
11:45am	Lunch break

Part 2 - 2:30pm-3:45pm

Learn and share **DEAIB strategies** for broadening participation in your ecosystem.

2:30pm	Welcome back
	Warm up activity: Snap!
	• Definitions for DEIAB (diversity, equity, accessibility, inclusion, and belonging)
2:55pm	Broadening participation
	• Presentation of key finding: Ecosystems that are designed to broaden
	participation in STEM prioritize diversity, equity, accessibility, inclusion, and
	belonging (DEAIB) in their <u>structure</u> , <u>collaborations</u> , and sharing of <u>resources</u> .
	• Examples of DEAIB strategies in ecosystem structure, collaborations, and
	resource sharing (Arizona and NE states)
	Large group activity: Crowdsourcing strategies related to ecosystem organization
3:30pm	Reflection and break

Part 3 - 3:45pm-5:35pm

Learn and share approaches to offering **authentic STEM learning experiences.** Develop a **plan** with action items and receive take-home materials including **resources**.

3:45pm	Welcome back
	• Warm-up activity: What's in the box?
4:05pm	Authentic STEM learning
	• Presentation of key finding: Authentic STEM engagement features relevant
	content, provides learner-centered experiences, and values participant identities.
	• Team shares examples of strategies for authentic STEM learning experiences
	(Alaska and North Carolina)
	Small group activity: Connecting learners and authentic STEM
4:40pm	Sharing and learning on topics of interest
	 Join a discussion group for a topic that interests you
5:05pm	Create action plan
	Reflect on the day and complete an action plan
5:15pm	Wrap-up
	 Materials from the design session and additional resources
	• Follow-up plan
	Final thoughts
5:30pm	Adjourn

CREDITS & DISCLAIMERS



This material is based upon work supported by NASA under cooperative agreement award numbers 80NSSC21M0007, NNX16AB94A, NNX16AB87A, and NNX16AC52A. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the view of the National Aeronautics and Space Administration (NASA).



This material is also based on work supported by the National Science Foundation under award number 1612555. Any opinions, findings, and conclusions or recommendations expressed in this presentation are those of the authors and do not necessarily reflect the views of the Foundation.