



what's next?

ASTC 2022
ANNUAL CONFERENCE

PRELIMINARY SCHEDULE

Subject to Change

**Events held at the David L. Lawrence Convention Center unless otherwise noted.
All times EDT.**



what's next?

ASTC 2022
ANNUAL CONFERENCE

TABLE OF CONTENTS

Welcome Letters.....	1
Code of Conduct.....	5
Preliminary Schedule	
Saturday, September 10, 2022	6
Sunday, September 11, 2022	6
Monday, September 12, 2022	12
Tuesday, September 13, 2022	29
Wednesday, September 14, 2022	44
Thursday, September 15, 2022.....	60
Poster Palooza.....	61
Sponsors	76
Exhibitors.....	79
Rosters	
ASTC Board of Directors.....	83
ASTC Conference Program Planning Committee	84
ASTC Staff	85

CARNEGIE SCIENCE CENTER

ONE OF THE FOUR CARNEGIE MUSEUMS OF PITTSBURGH

A note to ASTC colleagues from Jason C. Brown, MBA, PMP®
Henry Buhl, Jr., Director of Carnegie Science Center
Vice President of Carnegie Museums of Pittsburgh



Hello Colleagues!

Welcome to Pittsburgh, a city known for its transformation, innovation, and strength of community – and one of the friendliest places on Earth. On behalf of the Carnegie Science Center team and the entire Carnegie Museums of Pittsburgh family, we are proud to host you and thrilled that we can do it in person.

As we embrace the theme, *Traversing Tomorrow Together*, there has never been a better time to convene and share our challenges and successes – and create lasting relationships that continue beyond this conference. The role of museums is more crucial now than ever. We live in a society that depends on research, discovery, and innovation to protect and sustain us, yet faces significant challenges in the proliferation of misinformation, eroding trust in institutions, and lack of understanding about science and the scientific process.

These past two years, we have all confronted and adapted to enormous change. Carnegie Science Center is no exception; our journey through change is only beginning. The most obvious evidence of this is on our second floor where we recently completed renovation of the Buhl Planetarium, which now features a state-of-the-art projection system and modern, accessible seating. In addition, this fall we began installation of our next new permanent exhibition *Mars: The Next Giant Leap*, scheduled to open in November.

There is less visible, but even more significant change happening here beneath the surface. We are in the midst of a comprehensive and inclusive strategic planning process that will set our direction for the next 10 years. We cannot do this important work in isolation from the people we serve or from our colleagues in this field. We have so much to share and learn from one another.

While we all have our work cut out for us, we hope you will find your time in Pittsburgh to be inspiring and memorable. We are happy to announce that the Opening Party on Monday evening is a 100% zero waste event. We invite you all to join us for good food, creative libations, and fun science demonstrations (including the firing of the Tesla Coil). We will dance (though no one really wants to see *me* dance), do some gaming in The Rangos Giant Cinema, and experience the National Guitar Museum's final tour of *GUITAR: The Instrument That Rocked The World*. We want you to remember Pittsburgh's ASTC as an enriching and fun conference that left you feeling energized to embark on the winding, yet exciting road ahead.

Yours truly,

Jason C. Brown



Welcome to Pittsburgh!

We are so happy you are here with us. It has literally been years of waiting to see each other at the 2022 ASTC conference. WE MADE IT! This is a powerful moment, to catch up with lifelong friends, meet new colleagues, explore stimulating ideas, and create the world we envision for the future.

In true Pittsburgh collaborative fashion, this conference is special because there are two hosts. Our friends at the Carnegie Science Center and the wonderful team at the Children's Museum of Pittsburgh have planned a unique and exciting schedule that reflects our organization's mission *to provide innovative and inclusive museum experiences that inspire kindness, creativity, curiosity, and joy.*

The Children's Museum of Pittsburgh is looking forward to hosting you at 3 extraordinary events.

- Monday, September 12 from 3:30 to 5:30, experience MuseumLab, our newest, award-winning building for older kids, with cutting-edge art, making, and technology
- Tuesday, September 13 at 7:00, plan on a fun-filled party on our campus - think steamroller prints and climbing on a 3-story sculpture and of course tasty food and drink
- Thursday, September 15, 10:00 - 5:00, experience the exhibits, workshops, and programs in full force on Museum Experience Day

Finally, please consider participating in the Hands-On Science Showdown on Wednesday, September 14. We will be showcasing the very best science center and children's museum educators (that means you!) to inspire hundreds of students in the Pittsburgh region. It's an amazing way to give back to the community and highlight your organization. There will be prizes for the best demonstrations including free 2023 ASTC registrations and the Hands-On Cup - imagine the Stanley Cup for science and technology!

Thank you for being here.

My Very Best,

Jane Werner
Executive Director



CITY OF PITTSBURGH
OFFICE OF THE MAYOR
MAYOR ED GAINEY
He/Him/His

September 12, 2022

Greetings,

It is my great pleasure to welcome attendees to the Association of Science and Technology Centers (ASTC) Annual Conference co-hosted by the Carnegie Science Center and Children's Museum of Pittsburgh. We are honored to welcome hundreds of science-engagement professionals and leaders in science and technology centers and museums to our great City.

All global cities are grounded in centers of excellence and the ASTC has championed more than 500 science and technology centers, museums, children's museums, and other STEM-rich institutions since 1973. Their importance cannot be understated. Now more than ever, we must be champions and supporters of science engagement to build the next generation of leaders who will advance equity and inclusion in the fields of science and technology.

This year's conference represents a special opportunity for us to come together after two years and celebrate the very best of our city's science-engagement ecosystem.

The City of Pittsburgh is proud to host this event and applauds the efforts of the Association of Science and Technology Centers for its steadfast commitment to work inclusively, collaboratively and effectively to support science learning and engagement. On behalf of our entire city, I offer best wishes for a memorable and remarkable event.

Sincerely,

A handwritten signature in black ink, appearing to read "Ed Gainey", written over a light blue circular stamp.

Ed Gainey
Mayor of Pittsburgh

Dear Friends,

I am honored to welcome the Association of Science and Technology Centers to Pittsburgh. I also want to thank you for choosing the Platinum LEED®-certified David L. Lawrence Convention Center and our city as your host for the 2022 ASTC Annual Conference.

Pittsburgh is at the forefront of what is next, making our destination the ideal location for the ASTC Annual Conference. The city is brimming with innovators and thought leaders. Several tech companies either got their starts or are headquartered in Pittsburgh, including: Argo AI, Astrobotic, Duolingo, Bossa Nova and Aurora Innovation. Our community is working together to solve the world's problems.

VisitPITTSBURGH believes Pittsburgh is a must-see destination because of the experiences and attractions you can find Only in Pittsburgh, which certainly include this week's local hosts, the Carnegie Science Center and the Children's Museum of Pittsburgh. Both STEM-rich attractions emphasize learning and growth through exploration and hands-on activities.

While you're in the city, I hope you will take advantage of our additional Only in Pittsburgh attractions. I encourage you to ride the Duquesne Incline to a scenic overlook, bike along our mural-decorated waterfronts and grab a bite to eat at our award-winning restaurants. And, don't forget to tour additional world-class museums like The Andy Warhol Museum, the August Wilson African American Cultural Center and The Roberto Clemente Museum.

I wish you all the best during your stay in Pittsburgh.

Sincerely,



Jerad Bachar
VisitPITTSBURGH President & CEO

Fifth Avenue Place
120 Fifth Avenue, Suite 2800
Pittsburgh, PA 15222-3099
412.281.7711; 1.877.LOVEPGH
412.644.5512 fax

visitpittsburgh.com





what's next?

ASTC 2022
ANNUAL CONFERENCE

Code of Conduct for ASTC Conferences, Events, Online Engagement, and Project Participation

The Association of Science and Technology Centers (ASTC) Annual Conference—and other professional meetings, events, webinars, and projects organized by ASTC—are dedicated to providing a harassment-free experience for everyone attending or participating. We do not tolerate harassment of people in any form, and we empower all participants in our community to actively engage in creating a friendly and safe environment for all.

This Code of Conduct is part of ASTC's mission to champion and support science and technology centers and museums and the entire science engagement field—organizations that support lifelong science learning, connect science and society, engage diverse communities, and partner to tackle global and local challenges. ASTC is committed to advancing equity and social justice as foundational and essential values in all of our work. These values are essential to the practice of science, technology, and innovation which require seeking out and engaging a diversity of peoples, ideas, perspectives, life experiences, disciplines, knowledge systems, and approaches. ASTC values and celebrates contributions, discoveries, and novel solutions, regardless of their source. When all people are welcomed, respected, and included in our human pursuits, and when everyone has access and opportunity to pursue their aspirations, and when all people can participate fully and actively in creating and building the future, our association, members, and global society will be more equitable, prosperous, just, and resilient. Our world is rich in diversity, and ASTC embraces all diverse groups, including but not limited to, people of all races, colors, religions, political affiliations, sexual orientations, genders, ages, familial histories of education, physical and cognitive abilities, languages used, Indigenous status, and countries of origin.

As an attendee, presenter, exhibitor, sponsor, or guest at the ASTC Annual Conference and other events or programs organized by ASTC, I will:

- Conduct myself with integrity, respect, honesty, and credibility.
- Approach all events and interactions in accordance with the highest ethical standards of professionalism and personal conduct.
- Avoid all activities that will cause damage to or discredit my organization, ASTC, or myself.
- Embrace ASTC's diverse community of professionals and learners, and be inclusive of all audiences in my presentations, demonstrations, and conversations.
- Seek help from ASTC staff if I do not know how to fulfill any of the stated actions.

This Code of Conduct is in place to protect the safety of all participants. Contact, language, or imagery of a violent, threatening, sexual, discriminatory, demeaning, or disruptive nature is not appropriate for any in-person or online conference or project venue, including talks, workshops, parties, and online forum or media. If you witness any misconduct of this code, please report it to any ASTC staff member:

- In-person through the conference facility, including at the front desk.
- Online by emailing ideas@astc.org.

Attendees or project participants asked to stop any harassing or discriminatory behavior are expected to comply immediately. ASTC leadership, at their sole discretion, may take action to redress anything disrupting the event or project making the environment unsafe for participants, including asking any individuals to leave the event or project at their own expense and without a refund of any fees paid.



what's next?

ASTC 2022
ANNUAL CONFERENCE

SATURDAY, SEPTEMBER 10, 2022

6:00 pm

Registration: Early Satellite Pickup for Preconference Intensive Participants, Exhibitors, and Sponsors

Saturday, 6:00 PM - 7:00 PM

THE WESTIN PITTSBURGH

SUNDAY, SEPTEMBER 11, 2022

8:00 am

Registration

Sunday, 8:00 AM - 5:00 PM





what's next?

ASTC 2022
ANNUAL CONFERENCE

9:00 am

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Meaningful Makerspaces: Using Human-Centered Design to Create Mission-Driven Makerspaces from the Ground Up

STEM LEARNING, EDUCATION, AND PROGRAMS

Sunday, 9:00 AM - 5:00 PM

HELD AT THE CARNEGIE SCIENCE CENTER FAB LAB

In this session, participants will use human-centered design to develop a mission statement for their makerspace, rather than having technology be the main influence, and how to determine what kind of technology to use in their space.

Presenters: **Alana Baliga**, *Education/Outreach, Science Spectrum*; **Jon Doctorick**, *Director of STEM Outreach Programs, Carnegie Science Center*; **Liz Whitewolf**, *K-12 Education Director, The Fab Foundation*; **Megan Galinsky**, *Science Spectrum*; **Stephen Luciano**, *Fab Lab Technical and Education Manager, Carnegie Science Center*

Tags: DESIGN THINKING MAKING AND TINKERING

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Sustainability: Transforming Buildings in the Steel City to Provide High Quality Educational Experiences

OPERATIONS, MARKETING, AND BUSINESS DEVELOPMENT

Sunday, 9:00 AM - 1:00 PM

Through onsite visits to MuseumLab at the Children's Museum of Pittsburgh, Carnegie Science Center, and Phipps Conservatory and Botanical Gardens, participants will learn about strategies for balancing historic preservation with energy conservation, best practices for creating a healthy high-performing learning environment, and examples of design for increasing inclusivity and inspiration.

Presenters: **Bill Nichols**, *Director of Facilities, Children's Museum of Pittsburgh*; **Christen Cieslak**; **Christine Koebley**, *Senior Director of Finance and Administration, Children's Museum of Pittsburgh*; **Kim Amey**, *Deputy Director, Carnegie Science Center*; **Richard Piacentini**, *President and CEO, Phipps Conservatory and Botanical Gardens*

Tags: DESIGN THINKING SUSTAINABILITY

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

The Landscape of Education for Climate Action

STEM LEARNING, EDUCATION, AND PROGRAMS

Sunday, 9:00 AM - 1:00 PM

In this interactive session, participants will learn about climate change education in the United States and discuss their role within this system and how to engage in new efforts to address the climate challenges within their communities.



what's next?

ASTC 2022
ANNUAL CONFERENCE

Presenters: **Deb Morrison**, *Climate Justice Learning Designer and Advisor, CLEAR Environmental*; **Don Haas**, *Director of Teacher Programming, Museum of the Earth at the Paleontological Research Institution*; **Frank Niepold**, *Education Coordinator, National Oceanic and Atmospheric Administration*; **Jane Heinze-Fry**, *Former Special Program Director, Wade Institute for Science Education*; **Sandra Ryack-Bell**, *Executive Director, Wade Institute for Science Education*

Tags: [CLIMATE CHANGE](#) [CREATING A BETTER FUTURE](#)

10:00 am

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Co-designing Deliberative Events to Advance Community Priorities

STEM LEARNING, EDUCATION, AND PROGRAMS

Sunday, 10:00 AM - 4:00 PM

Dialogue & Deliberation can help communities make decisions and take action on issues at the intersection of science, society, and policy. Learn from your peers' pilot collaborations, including how they attended to equity and navigated partnerships.

Presenters: **Amanda Fisher**, *Senior Manager of Programs, ASTC*; **Claire Dorsett**, *Associate Director of Strategic Content, Great Lakes Science Center*; **Courtney Breese**, *Executive Director, National Coalition for Dialogue & Deliberation*; **Laura Bartock**, *Community Science Fellow, ASTC*; **Naomi Wallace**, *Manager of Impact Initiatives, ASTC*; **Nicholas Felts**, *Associate, Kettering Foundation*; **Sophie Mueller**, *Innovation and Economic Development Coordinator*

Tags: [COMMUNITY IMPACT](#) [PARTNERSHIPS](#)

Chan
Zuckerberg
Initiative 

Sponsored by the Chan Zuckerberg Initiative.

12:00 pm

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Building Bridges to the Future: Addressing the Leadership Challenges of Today and Tomorrow

LEADERSHIP

Sunday, 12:00 PM - 4:00 PM



what's next?

ASTC 2022
ANNUAL CONFERENCE

This highly interactive session for senior leaders (CEOs, Executive Directors, C-Suite leaders, etc.) will present some of the toughest issues leaders face today. Lively discussions, solution room challenges, and "safe spaces" will be established to allow

Presenters: **Christian Greer**, *President and CEO, Michigan Science Center*, **Lucy Hale**, *Chief Business Officer, Michigan Science Center*, **Charlie Trautmann**, *Trautmann & Associates*, **Kirsten Ellenbogen**, *President and CEO, Great Lakes Science Center*, **Heather Norton**, *Chief Science Officer, Discovery Place*, and others

Tags: [MANAGEMENT](#)

2:00 pm

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Bio-Tinkering Bootcamp: Systems and Strategies for Creating Experiences that Support Creativity and Making with Biology

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Sunday, 2:00 PM - 6:00 PM

In this hands-on interactive session, participants will learn about and explore the emerging worlds of bio-making and biodesign; including opportunities to brainstorm with fellow participants and create using several different biological systems.

Presenters: **Abbey Thompson**, *Director, The Tech Interactive*; **Anja Scholze**, *Program Director of Biology + Design, The Tech Interactive*; **Caitlin Nealon**, *Life Sciences Experience Developer, The Tech Interactive*; **James Wong**, *Content Specialist, The Tech Interactive*

Tags: [EMERGING TECHNOLOGY](#) [MAKING AND TINKERING](#)

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Designing for Empathy Lab

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Sunday, 2:00 PM - 6:00 PM

This interactive workshop will provide an overview for the "Designing for Empathy" frameworks where participants will create tools to facilitate conversations and evaluate how they can be adapted to make empathy-building experiences in your museum.

Presenters: **Anne Fullenkamp**, *Senior Director of Creative Experiences, Children's Museum of Pittsburgh*; **Camilo Rojas**, *Postdoctoral Research Fellow, MIT Museum*; **Elif Gokcigdem**, *Founder & President, ONE - Organization of Networks for Empathy*; **Jim Wharton**, *VP, Education, Mote Marine Laboratory*; **Tom Rockwell**, *Creative Director of Global Collaborations, Exploratorium*

Tags: [EXHIBIT DESIGN](#) [REBUILDING AND REIMAGINING](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

From Accommodations to Inclusion: Co-creating Maker Programs with and for Neurodiverse Youth

STEM LEARNING, EDUCATION, AND PROGRAMS

Sunday, 2:00 PM - 6:00 PM

In this interactive workshop, participants will gain a better understanding of how to develop maker programming that is inclusive of neurodiverse audiences, including those on the autism spectrum, through discussions and the development of materials.

Presenters: **Ariana Riccio**, *Researcher, Education Development Center*; **Delia Meza**, *Manager of Family Learning & Community Partnerships, New York Hall of Science*; **Kavitha Murthi**; **Samantha Tumolo**, *Makerspace Coordinator, New York Hall of Science*; **Wendy Martin**, *Research Scientist, Education Development Center*

Tags: [ACCESSIBILITY](#) [MAKING AND TINKERING](#)

PRECONFERENCE ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Science Communication and Engagement with Faith Communities

STEM LEARNING, EDUCATION, AND PROGRAMS

Sunday, 2:00 PM - 6:00 PM

In this interactive workshop, participants will learn about the historical context of science engagement, how religion is relevant to public engagement with science, and programming on human origins that is inclusive of diverse faith perspectives.

Presenters: **Briana Pobiner**, *Research Scientist and Museum Educator, National Museum of Natural History*; **Rachel Kline**, *Program Associate, American Association for the Advancement of Science (AAAS)*; **Robert O'Malley**, *Project Director, DoSER, American Association for the Advancement of Science (AAAS)*

Tags: [COMMUNITY IMPACT](#) [DIVERSITY AND EQUITY](#)

5:00 pm

INDEPENDENT EVENT (SIGN UP DIRECTLY WITH WALK THE BURGH TOURS)

Walking Tour: Best of the Burgh Science History

Sunday, 5:00 PM - 7:00 PM

Explore the heart of Downtown by foot and discover must-see cultural and historical landmarks as well as iconic buildings. Learn about Pittsburgh's renewal with its upcoming industries, focus on science and sustainability. Experience the implementation of community building strategies while walking down major avenues as well as hidden alleyways and crossing over beautiful squares in Downtown Pittsburgh.



Photo courtesy Walk the Burgh Tours



Tour starts at the David L. Lawrence Convention Center and ends at Market Square. Walking distance is approximately 2 miles.

Price: Adults \$28 ([Sign Up](#))

6:00 pm

Navigation and Networking Gathering

Sunday, 6:00 PM - 7:00 PM

THE WESTIN PITTSBURGH, WESTMORELAND CENTRAL/EAST

Meet members of ASTC's Conference Program Planning and Committee and others and get some tips and tricks for navigating the conference. This session is open to all, but first-time attendees are especially encouraged to attend. Prizes will be awarded.



7:00 pm

Preconference Meet Up

Sunday, 7:00 PM - 9:00 PM

BACKYARD AT 8TH AND PENN

Join other attendees before the conference officially kicks off at this casual meet up at the [Backyard at 8th and Penn](#). Grab yourself a drink and enjoy the outdoor space with colleagues as you familiarize yourself with Pittsburgh.





what's next?

ASTC 2022
ANNUAL CONFERENCE

MONDAY, SEPTEMBER 12, 2022

7:30 am

Registration

Monday, 7:30 AM - 5:00 PM

8:30 am

Meet and Greet Breakfast

Monday, 8:30 AM - 9:00 AM

9:00 am

Opening Keynote Session

Monday, 9:00 AM - 11:00 AM

“Small Talks/Big Ideas”

Several world-leading Pittsburgh-based experts and innovators will share some of the cutting-edge work they are doing in science, learning, and social impact. These short, inspirational, TED-style presentations will remind us of one of our critical roles as science center, museum, and science engagement leaders—to provide people with inspiration and understanding that a more hopeful future is possible!



Bill Strickland, *Founder and Executive Chairman, Manchester Bidwell Corporation*



Aditi Gurkar, *Assistant Professor of Medicine, Aging Institute, University of Pittsburgh*



what's next?

ASTC 2022
ANNUAL CONFERENCE



Annouk Wipprecht, *FashionTech Designer*



Valerie Kinloch, *Renée and Richard Goldman Endowed Dean and Professor, University of Pittsburgh School of Education*

11:00 am

Exhibit Hall Open

Monday, 11:00 AM - 5:00 PM



Picture Yourself: Headshots in the Exhibit Hall

Monday, 11:00 AM - 5:00 PM

Attendees can get free photo headshots to update their LinkedIn profile or for other professional (or personal) use.

Science Engagement Story Recording

Monday, 11:00 AM - 5:00 PM

NEAR REGISTRATION IN CONCOURSE B/C



How has science engagement had an impact on your life and career? ASTC, in conjunction with StoryHabitat, is gathering stories in preparation for ASTC's 50th anniversary celebration next year. What (or who) inspired you to get involved in science engagement? Is there a moment in science engagement you will never forget? What is the most meaningful project you have been a part of? Your story is part of our story together. Select stories will be featured as part of ASTC's 50th anniversary next year. Stop by to leave a quick recording or browse others' stories.



what's next?

ASTC 2022
ANNUAL CONFERENCE

12:00 pm

Lunch in the Exhibit Hall

Monday, 12:00 PM - 1:00 PM

1:00 pm

Beyond Science Lessons, Towards Science Experiences

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Monday, 1:00 PM - 1:45 PM

In this session, a cross-disciplinary team will provide a framework for designing powerful science-centered experiences that spark visitor curiosity, resist singular interpretations, and create space for discovery. Presenters will focus on two interactives from the soon to be opened MIT Museum as case studies.

Presenters: **Benjamin Bojko**, *Tech Director, Bluecadet*, **David Nunez**, *Director of Technology, MIT Museum*, **Rob Hassler**, *Bluecadet*, **Wendy Evans Joseph**

Tags: [ADVANCED TECHNOLOGY](#) [EXHIBIT DESIGN](#)

Building Collaborations Having Statewide Impact: Exploring Asset-Based Approaches to Partnering, Implementing and Funding Rural Communities

EXTERNAL GROUPS AND COLLABORATORS

Monday, 1:00 PM - 1:45 PM

Two statewide initiatives will highlight strategies, challenges, and lessons learned through collaborative support of STEM learning and community engagement in rural counties. Interactive break-outs will focus on unique approaches to government support, asset mapping, and customization, and evaluation with application to those working with a range of stakeholders.

Presenters: **Alissa Lange**, *Associate Professor, Early Childhood Education Director*, **Dale McCree**, *Vice President of Audience & Community Engagement, Discovery Center at Murfree Spring*, **Duke Johnson**, *Director, Clark Planetarium*, **Nicholas Hoffmann**, *Education Program Manager, Clark Planetarium*, **Tara MacDougall**, *Chief Executive Officer, Discovery Center at Murfree Spring*

Tags: [COMMUNITY IMPACT](#) [PARTNERSHIPS](#)

Looking Back, Moving Forward: Reflections and Roadmaps for Rebuilding Our Field Together

LEADERSHIP

Monday, 1:00 PM - 1:45 PM

Our field is at a crossroads. The pandemic exacerbated existing challenges while the racial equity reckoning centered the need to foreground equity. In this session, we will share and discuss



what's next?

ASTC 2022
ANNUAL CONFERENCE

implications of a landscape study, gap analysis, and draft recommendations for an agenda to advance leadership and field development.

Presenters: **Amanda Fisher**, *Senior Manager of Programs, ASTC*; **Melissa Ballard**, *Director of Programs, ASTC*; **Preeti Gupta**, *Senior Director of Children and Youth Programs, American Museum of Natural History*; **Rena Dorph**, *Director, The Lawrence Hall of Science*

Tags: [INCLUSIVE WORKFORCE DEVELOPMENT](#) [REBUILDING AND REIMAGINING](#)

Power in the People: Community Engagement Perspectives in a Time of Crisis

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Monday, 1:00 PM - 1:45 PM

Panelists will explore the importance of community engagement from diverse organizational perspectives, including outdoor education in schools and green spaces, neighborhood engagement at a historic national park, informal education at a national museum, and exhibition development. Participants are encouraged to bring questions, inspiration, and transformative success stories.

Presenters: **Elana Mintz**, *Educator, Urban Adventure Squad*; **Jennifer Collins**, *Manager in the Office of Education, Outreach, and Visitor Experience, National Museum of Natural History*; **Shannah Cumberbatch**, *Program Coordinator, Friends of Kenilworth Aquatic Gardens*; **Siobhan Starrs**, *Exhibit Developer, Smithsonian Institution*

Tags: [CLIMATE CHANGE](#) [COMMUNITY IMPACT](#)

Reinforcing the Message: Weaving Climate Stories Throughout Galleries and Exhibits

[EXHIBITS, EXPERIENCES, AND TECHNOLOGY](#)

Monday, 1:00 PM - 1:45 PM

Last year, the Bruce Museum and Carnegie Museum of Natural History both launched in-gallery experiences that seed climate change impact stories throughout multiple galleries. In this session, members from both project teams will share their approaches to kickstarting the climate conversation and inspiring visitor action every step of the way.

Presenters: **Daniel Ksepka**, *Curator of Science, Bruce Museum*; **Laurie Giarratani**, *Director of Education, Carnegie Museum of Natural History*; **Sarah Crawford**, *Director of Exhibitions & Design, Carnegie Museum of Natural History*; **Valentina Miller**, *Production Lead, Night Kitchen Interactive*

Tags: [CLIMATE CHANGE](#) [EXHIBIT DESIGN](#)

The Infodemic: Addressing the Global Crisis of Misinformation

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Monday, 1:00 PM - 1:45 PM

Effective science communication to tackle misinformation is essential to a thriving democracy. Misinformation and disinformation destroy trust, can be linked to the global growth of populism, and are detrimental to personal and public health. This panel will explore effective strategies employed by CASC's highly successful ScienceUpFirst (www.scienceupfirst.com) initiative, including



what's next?

ASTC 2022 ANNUAL CONFERENCE

social media activation, co-developing campaigns with community groups, and coordinating strategies across research, government, and civil society to address science misinformation.

Presenters: **Marianne Mader**, *CEO, Canadian Association of Science Centres*; **Magda Byma**, *Director of ScienceUpFirst, Canadian Association of Science Centres*; **Amanda Fruci**, *President, Amada Fruci Communications*

Tags: PUBLIC PROGRAMS COVID-19

This session has been organized by the Canadian Association of Science Centres.



Transforming Our Capacity for Inclusive and Authentic STEM Experiences for Latinx Audiences

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Monday, 1:00 PM - 1:45 PM

How can you spark change within your organization, and in relationship to Latinx communities and STEM? This session brings together CEO, evaluator, facilitation, and program development expertise from the National Science Foundation funded Cambio program to identify strategies, actions, and insights to sustainably engage your organization and your communities.

Presenters: **Andres Henriquez**, *Director of STEM Education Strategy, Education Development Center*; **Cecilia Garibay**, *Principal, Garibay Group*; **Jenni Martin**, *Director of Strategic Initiatives, Children's Discovery Museum of San Jose*; **Marilee Jennings**, *Executive Director, Children's Discovery Museum of San Jose*; **Veronica Garcia-Luis**, *Director of Diversity, Equity & Inclusion, Exploratorium*

Tags: DIVERSITY AND EQUITY REBUILDING AND REIMAGINING

Lightning Session: Co-Creation

Monday, 1:00 PM - 1:45 PM

Co-Creating an Exhibition About Wildfires & Forests

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

We will present and discuss the co-creation of this exhibition about wildfires and forests set to open in Portugal in 2023/2024. We will focus on the co-creation process with policy-makers, researchers, and local communities; the exhibition's modularity and the exhibition as a town hall will trigger a nationwide discussion.

Presenters: **Rosalia Vargas**, *President, Pavilion of Knowledge - Ciência Viva*; **Pedro Russo**, *Pavilion of Knowledge - Ciência Viva*

Tags: EXHIBIT DESIGN GLOBAL PERSPECTIVE

Co-Creating Exciting Educational Content With Research Scientists and Experts

STEM LEARNING, EDUCATION, AND PROGRAMS

LIGHTNING SESSION: CO-CREATION



LIGHTNING SESSION: CO-CREATION

As museums, we are often tasked with communicating science authentically and connecting our guests directly with subject matter experts. However, not all content experts are trained in science communication and not all educators are confident collaborating with scientists. Learn tips and tricks for recruiting and guiding scientists to co-create engaging learning experiences.

Presenters: **Katie Wolfson**, *Science Education Specialist and Virtual Programs Coordinator, National Center for Atmospheric Research/UCAR*, **Tiffany Fourment**, *Science Education Specialist, National Center for Atmospheric Research/UCAR*

Tags: [SCIENCE EDUCATION](#) [OUTREACH](#)

STEM in the Burque: Career Pathway-Focused Exhibition for the Community by the Community

[EXHIBITS, EXPERIENCES, AND TECHNOLOGY](#)

Learn about Explora's experience in developing a teen-focused exhibition that recently opened in the museum's new youth workforce development center. Emphasizing teen involvement and community support in times of a pandemic, the session will also show how Explora used its "listen, welcome, and co-create" engagement strategy in all development stages.

Presenters: **Amon Haruta**, *Director of Project Management and Exhibitions, Explora*, **Shane Montoya**, *Director of Exhibits, Floor Experience, and Operations, Explora*

Tags: [COMMUNITY IMPACT](#) [PROJECT MANAGEMENT](#)

The Network Effect: Science & Technology Centers as Hubs of Innovation and Creativity

[LEADERSHIP](#)

We will discuss best practices in creating and reinforcing networks as a way to promote innovation and creativity. In our field of action, knowledge and innovation are increasingly produced in the context of networks, understanding how to develop and support these networks is essential for science & technology centers.

Presenters: **Rosalia Vargas**, *President, Pavilion of Knowledge - Ciência Viva*, **Pedro Russo**, *Pavilion of Knowledge - Ciência Viva*

Tags: [FUTURE PLANNING](#) [COVID-19](#)

1:30 pm

ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Day at MuseumLab: A Creative Track of Interactive Sessions Outside the Conference Center (Session One)



what's next?

ASTC 2022
ANNUAL CONFERENCE

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Monday, 1:30 PM - 3:30 PM

THIS SESSION WILL BE HELD AT MUSEUMLAB

Collaboration is at the heart of innovation at Children's Museum of Pittsburgh. In this session, which will take place at MuseumLab, participants will choose from a suite of drop-in, interactive activities that showcase different ways of partnering with community members, artists, researchers, and more. Activities will cover topics from racial justice to immersive exhibits, metalworking, emotion and media- and technology-based research protocols.

Presenters: **Bridget Kiger-Lee**, *Asst. Professor, University of Pittsburgh*; **Deborah Coppola**, *Professional Development Specialist, Children's Museum of Pittsburgh*; **Mary Henjes**, *Metals Mentor, Children's Museum of Pittsburgh*; **Peter Wardrip**, *Assistant Professor of STEAM Education*; **Tress Belesi**, *Learning & Research Associate, Children's Museum of Pittsburgh*

Tags: [SOCIAL JUSTICE](#) [VISITOR EXPERIENCE](#)

2:00 pm

Assessing How Americans Want to Engage With Science: Research to Inform Public Engagement Initiatives

LEADERSHIP

Monday, 2:00 PM - 3:30 PM

Join us for a conversation about the key findings from a year-long study examining Americans' appetite for science, motivations for participating in science-related activities, and the barriers that stand in the way—especially among marginalized communities.

Presenters: **Eve Klein**, *LISTEN Network Weaver, ASTC*; **Rose Hendricks**, *ASTC*

Tags: [FUTURE PLANNING](#) [MARKET RESEARCH](#)

Being Okay With Not Being Okay: Thinking About Mental Health

STEM LEARNING, EDUCATION, AND PROGRAMS

Monday, 2:00 PM - 2:45 PM

Is it okay to not be okay? Join Explora staff for an interactive workshop based on their Thinking About Mental Health project, exploring the unique ways you can involve your communities in important conversations about mental health.

Presenters: **Caitlin Everhart**, *Project Manager, Explora*; **Jeanette Ortiz**, *Youth Development Specialist, Explora*

Tags: [CREATING A BETTER FUTURE](#) [TEEN PROGRAMS](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Beyond STEM: Making and Tinkering Experiences That Center Social Emotional Learning, Literacy, and Identity

STEM LEARNING, EDUCATION, AND PROGRAMS

Monday, 2:00 PM - 3:30 PM

How can informal learning spaces respond to the emerging needs of children in a changing learning landscape? Team members from the Tinkering Studio and KID Museum will share their experiences using making and tinkering to support young people beyond STEM in the areas of literacy, social-emotional learning, and identity development.

Presenters: **Jacqueline Eyl**, *Chief Program Officer, KID Museum*; **Maya Oliver**, *Program Manager, KID Museum*; **Dia Stone**, *Program Manager, KID Museum*; **Becky Zeisel**, *Program Manager, KID Museum*; **Stephanie Muscat**, *Tinkering Specialist, Exploratorium*; **Claudia Caro Sullivan**, *Project Director of Early Childhood Tinkering Programs, Exploratorium*

Tags: [MAKING AND TINKERING](#) [REBUILDING AND REIMAGINING](#)

Cultivating Youth Voice: Storytelling for a Purpose

STEM LEARNING, EDUCATION, AND PROGRAMS

Monday, 2:00 PM - 3:30 PM

How can storytelling be used as a tool to empower communities and enhance STEM programs? In this session, participants will hear how young people shared their STEM stories through the unCommission, they'll explore their own STEM stories, and they'll get concrete tools to apply storytelling to the communities they serve.

Presenters: **Jen Elliott**, *Manager, Youth Leadership and Alumni Programs, Intrepid Sea, Air & Space Museum*; **Priya Mohabir**, *Senior Vice President Youth Development & Museum Culture, New York Hall of Science*; **Shihadah Saleem**, *Director of Youth Programs and Pathways, New York Hall of Science*; **Teresa Mooney**

Tags: [SCIENCE EDUCATION](#) [YOUTH DEVELOPMENT](#)

Engaging Your Community on Difficult Topics: Lessons From Communities For Immunity

ADVANCEMENT AND PARTNERSHIPS/FUNDRAISING

Monday, 2:00 PM - 3:30 PM

Learn more about how museums (and libraries and tribal organizations) are leveraging their roles as trusted community hubs to advance progress on important challenges. We will draw from the *Communities for Immunity* initiative to increase vaccine confidence and uptake in their communities by working with partners and engaging their audience in locally-relevant ways. Get inspired by stories from museums across the United States and learn more about how to leverage your role and relationships in your community to engage your audience on critical social issues.

Presenters: **Naomi Wallace** *Manager of Impact Initiatives, ASTC*; **Beth Demke**, *Executive Director, North Dakota's Gateway to Science*; **Ime Edokpayi**, *Public Education Specialist, The Lawrence Hall*



what's next?

ASTC 2022
ANNUAL CONFERENCE

of Science; **Cassandra Williams Rush**, *C. Williams Rush Museum of African-American Arts & Culture*;
Dr. C. Stewart Darby

Tags: [COMMUNITY IMPACT](#) [COVID-19](#)

Equity in the UK: Science Centres' Efforts Towards Greater Diversity, Inclusion, and Access

[DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE](#)

Monday, 2:00 PM - 3:30 PM

Join us to learn about initiatives that aim to advance equitable practice in science centers. We will interact in a safe space to discuss challenges, explore frameworks, try new tools, and share inspiring (and uninspiring) practices, as we push our collective understanding, including how we might measure progress towards DEAI goals.

Presenters: **Bethan Ross**, *International Centre for Life*; **Jennifer DeWitt**, *Senior Research Fellow, University College London*; **Shaaron Leverment**, *Deputy CEO, The UK Association for Science and Discovery Centres*

Tags: [DIVERSITY AND EQUITY](#) [PARTNERSHIPS](#)

Leveraging Artemis and the Return to the Moon to Engage New Learners

[EXHIBITS, EXPERIENCES, AND TECHNOLOGY](#)

Monday, 2:00 PM - 3:30 PM

This session will present highlights of hands-on interactive activities and programs in the NASA TEAM II program (Teams Engaging Affiliated Museums and Informal Institutions). Join awardees from the Carnegie Science Center, Fairchild Botanic Gardens, and the Space Science Institute for ideas to make your Artemis programs fun for all!

Presenters: **Amelia Chapman**, *STEM Informal Education Specialist, Jet Propulsion Laboratory*; **Amy Padolf**, *Director of Education, Space Science Institute*; **Leslie Lowes**, *Informal Education Specialist, Jet Propulsion Laboratory*; **Tina Seidelson**, *Director of Student Engagement, Carnegie Science Center*

Tags: [SCIENCE EDUCATION](#) [VISITOR EXPERIENCE](#)

Say Yes to the Mess: Our DEAI Journey Reflections and You Taking Action Going Forward!

[DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE](#)

Monday, 2:00 PM - 3:30 PM

In this session, hear from three museums diversity, equity, access, and inclusion (DEAI) journeys from starting with having nicely written plans, guiding documents and strategies to the messiness of implementation, tensions, and working towards organizational change. Explore topic-specific questions, tools, and resources to identify next steps towards taking DEAI action.



what's next?

ASTC 2022
ANNUAL CONFERENCE

Presenters: **Robby Callahan Schreiber**, *Museum Access & Equity Director, Science Museum of Minnesota*; **Tifferney White**, *Chief Learning Officer, Discovery Place*; **Vanessa Avery**, *HR Manager, Exploratorium*; **Veronica Garcia-Luis**, *Director of Diversity, Equity & Inclusion, Exploratorium*

Tags: [DIVERSITY AND EQUITY](#) [HUMAN RESOURCES/STAFFING](#)

The Use of Mobile Informal STEM Labs for Bridging Educational Gaps in Rural Communities

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Monday, 2:00 PM - 3:30 PM

Rural communities often lack resources and access to informal STEAM education. Mobile STEAM labs have the potential to bridge educational access gaps by meeting students where they are! This is especially vital and relevant in low income, geographically isolated communities which face compounding barriers to education.

Presenters: **Eliani Rubio**, *Lead Bisbee Science Lab High School Intern, Bisbee Science Exploration & Research Center*; **Jacquelyn Esteves**, *Program Director, Bisbee Science Exploration & Research Center*; **Thea Van Gorp**, *Bisbee Science Exploration & Research Center*

Tags: [OUTREACH](#) [SMALL MUSEUMS](#)

Through an Indigenous Lens: Support and Advocacy of Science Centres and Museums Through Indigenous Advisory Committees

[DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE](#)

Monday, 2:00 PM - 3:30 PM

Through cultural competency training, working with local knowledge keepers, and including a multiplicity of Indigenous perspectives; science centers and museums can ensure Indigenous People are uplifted and their voices are amplified. Listen to stories of learning, relationships, and reciprocity with Science North's Indigenous Advisory Committee members.

Presenters: **Cindy Crowe**; **Emily Kerton**, *Project Lead - Northwest Expansion, Science North*; **Julia Pegahmagabow**, *Indigenous Advisory Committee Member, Science North*

Tags: [CREATING A BETTER FUTURE](#) [INEQUITIES IN SOCIETY](#)

Lightning Session: Fundraising, Community Outreach, Social Media Marketing & More!

Monday, 2:00 PM - 2:45 PM

LIGHTNING SESSION:

This Is Your Moment: Service-Minded Funding and Innovative Public Funding Strategies in Post Pandemic Landscape

[ADVANCEMENT AND PARTNERSHIPS/FUNDRAISING](#)

As we traverse tomorrow together, public funding will be critical for our, for your, success. This lightning session will highlight several strategies on how you can create robust



LIGHTNING SESSION: FUNDRAISING, COMMUNITY OUTREACH, SOCIAL MEDIA MARKETING, AND MORE!

public funding opportunities, fueled by partnerships and programs that prioritize common good through servant leadership principles.

Presenters: **Stephen White**, *Chief Strategy Officer and Vice President of Partnerships and Business Development, COSI*

Tags: [MAKING THE CASE FOR SCIENCE CENTERS](#) [PUBLIC PROGRAMS](#)

How a Capital Campaign Can Be the Organizing Tool to Achieve Your Future Vision

[ADVANCEMENT AND PARTNERSHIPS/FUNDRAISING](#)

A future vision needs an organizing force to make it a reality. In an era of rapid social change, local communities are in need for their science and technology centers to address key issues now more than ever. A capital campaign is a relevant solution to fulfill that vision.

Presenters: **Amy Pausche**, *Vice President of Development, Science Center of Iowa*; **Dan Raedeker**, *Vice President of Community Engagement, Science Center of Iowa*

Tags: [FUNDRAISING](#) [FUTURE PLANNING](#)

Zero Facebook Likes and Dire Web Traffic? Turn the Tide With Cost Effective Marketing Tools

[OPERATIONS, MARKETING, AND BUSINESS DEVELOPMENT](#)

From free tools available to nonprofits, such as Google Ads and Google Analytics, to more pricey options such as Facebook Ads and print advertisements, this session will investigate the tools which work - and those which in our case didn't - to get the word out about events and exhibitions.

Presenters: **Heather Birchall**, *Tour Manager, Virtual Science Center*

Tags: [MARKETING](#) [SOCIAL MEDIA ENGAGEMENT](#)

Learn Effective Education and Community Outreach Strategies through the Principles of Servant Learning

[LEADERSHIP](#)

Developed during the pandemic and refined at the Harvard School Graduate School of Education Leading Learning program, this session will share the tenants of an innovative approach that science centers can use to address education equity in their community, which builds on the principles of Servant Leadership, called "Servant Learning."

Presenters: **Stephen White**, *Chief Strategy Officer and Vice President of Partnerships and Business Development, COSI*

Tags: [COMMUNITY IMPACT](#) [PARTNERSHIPS](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

3:30 pm

ASTC INTENSIVE (PREREGISTRATION REQUIRED)

Day at MuseumLab: A Creative Track of Interactive Sessions Outside the Conference Center (Session Two)

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Monday, 3:30 PM - 5:30 PM

THIS SESSION WILL BE HELD AT MUSEUMLAB

How can you infuse art and making into your work? Be inspired with creativity as you engage in hands-on, interactive activities and learn by doing at this session, which will take place off-site at MuseumLab. Split your time among a wide range of activities that will meld math, science, and engineering with fashion, metalworking, fiber arts, animation, arts-based research, a tour of the museum (housed in the first commissioned Carnegie Public Library), and more.

Presenters: **Elizabeth Kollmann**, *Manager, Research and Evaluation, Museum of Science*; **Gabrielle Rappolt-Schlichtmann**, *Executive Director & Chief Scientist, EdTogether*; **Kay Shabbaz**, *Youth Mentor, Children's Museum of Pittsburgh*; **Rebecca Grabman**, *MAKESHOP Manager, Children's Museum of Pittsburgh*; **Zainab Adisa**, *Learning & Research Associate, Children's Museum of Pittsburgh*

Tags: SOCIAL JUSTICE VISITOR EXPERIENCE

Film: *Not the Science Type*

Monday, 3:30 PM - 4:00 PM

EXHIBIT HALL STAGE

Not The Science Type highlights four brilliant minds, showcasing women who break down boundaries within their fields – biology, engineering and science and technology-based applications. (Also shown Tuesday at 3:30 PM)

4:00 pm

Connecting on Climate: Tools for Action, Engagement and Connection Across Cultural Institutions

STEM LEARNING, EDUCATION, AND PROGRAMS

Monday, 4:00 PM - 5:30 PM

Climate change demands urgent responses from science engagement institutions and presents an opportunity to share a unified voice on climate action. This session will explore climate education interests, needs, and concerns of museum educators. Participants will engage in interactive discussions and activities highlighting the importance of active listening and solutions-based approaches.



what's next?

ASTC 2022
ANNUAL CONFERENCE

Presenters: **Annie Shvach**; **Emily Hestness**; **Jen Kretser**, *Director of Programs, The Wild Center*; **Sarah States**, *Director of Research and Science Education, Phipps Conservatory and Botanical Gardens*; **Taiji Nelson**, *Senior Program Manager, Carnegie Museum of Natural History*

Tags: [CLIMATE CHANGE](#) [CREATING A BETTER FUTURE](#)

Design Lab X Bootcamp: Community Co-creation for Impact, Change, and Leadership LEADERSHIP

Monday, 4:00 PM - 5:30 PM

In a moment where we are collectively dreaming, revisioning, and navigating the emergent future in what feels like a white-water environment, the museum field and its leadership are looking to better serve their little corner of the world. And to do it in ways that further impact, innovation, and equity.

Presenters: **Bill Swaney**, *Holly Truitt Consulting*; **Holly Truitt**, *spectrUM Discovery Area*; **Sam Dean**, *Executive Director, Scott Family Amazeum*

Tags: [DESIGN THINKING](#) [REBUILDING AND REIMAGINING](#)

Expanding the Universe: Building Partnerships in a COVID World and Beyond

STEM LEARNING, EDUCATION, AND PROGRAMS

Monday, 4:00 PM - 5:30 PM

Informal institutions help communities come together to learn in a space that builds trust and understanding. This session explores resources and best practices that unpack the process of community building and co-creation from the perspective of four science center's growing unique partnerships with organizations representing diverse communities underrepresented in STEM.

Presenters: **Bree Oatman**, *Education Director, South Dakota Discovery Center*; **Erika Wright**, *Center for Astrophysics | Harvard & Smithsonian*; **Irene Porro**, *Director, Christa McAuliffe Center for Integrated Science Learning at FSU*; **Lauren Butcher**, *School and Community Programs Manager, Explora*; **Yesenia Perez**, *Informal Education Specialist II, Space Telescope Science Institute*

Tags: [OUTREACH](#) [SCIENCE EDUCATION](#)

Feeling "Art-Sci": An Upside-Down Look at Collaborations Between Performing Arts and Exhibiting Science

EXTERNAL GROUPS AND COLLABORATORS

Monday, 4:00 PM - 5:30 PM

Artists and science communicators are natural allies. Your local arts community holds rich potential for supporting the mission of science communication while bringing people together for shared experiences. This interactive session offers firsthand accounts of successful sci-art collaborations, and ideas on how to cultivate relationships with your local creative community.

Presenters: **A Erik Stengler**, *Assistant Professor, Cooperstown Graduate Program*; **Ricky Coates**, *Co-Artistic Director, Matheatre*; **Sadie Bowman**, *Managing Director, Matheatre*

Tags: [COMMUNITY IMPACT](#) [OUTREACH](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Getting Started in Community Science

EXTERNAL GROUPS AND COLLABORATORS

Monday, 4:00 PM - 5:30 PM

Through community science, community members collaborate to conduct and leverage scientific research and technological innovation to advance community priorities. In our session, we will explore how to find common ground and share leadership with community-serving partners, as well as how to assess your readiness to embark on new collaborative efforts.

Presenters: **Claudia Martinez Gray**, *Dialogue & Deliberation Fellow and Director of Education, International Museum of Art and Science*; **David Valentine**, *Dialogue & Deliberation Fellow and Community Engagement Specialist, Science Museum of Minnesota*; **Rachel Hogan Carr**, *Executive Director, Nurture Nature Center*; **Max Cawley**, *Director, Climate Research and Engagement, Museum of Life and Science*

Tags: [COMMUNITY IMPACT](#) [SOCIAL JUSTICE](#)

House of Commons: Let the Debates Begin!

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Monday, 4:00 PM - 4:45 PM

Come take a stand and win others to your side! In this session, all are invited to take part in debating the burning issues of the science center field where attendees can convince individuals to join their side, and at the conclusion the aye and no votes are tallied.

Presenters: **Claire Pillsbury**; **Mikko Myllykoski**, *CEO, Heureka, the Finnish Science Centre*

Tags: [CREATING A BETTER FUTURE](#) [REBUILDING AND REIMAGINING](#)

NFTs: Exploring Blockchain and Education at the Cutting Edge

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Monday, 4:00 PM - 5:30 PM

Don't let FUD (Fear, Uncertainty, Doubt) keep you from staying up to date with innovation! Non-fungible tokens (NFT)—part of the growing blockchain technology movement—already impact broad sectors of industry, daily life, and culture. In this session, build basic knowledge of the NFT ecosystem, how to build one, and how to use them!

Presenters: **Audrey O'Connell**, *Co-Founder and Business Director, Horner Science Group*; **Bruce Wyman**, *USD Design – MACH Consulting*; **Jeremy Kenisky**; **Kirsten Ellenbogen**, *President and CEO, Great Lakes Science Center*; **Joseph Quiñones**, *Vice President, Marketing, Phillip and Patricia Frost Museum of Science*

Tags: [EMERGING TECHNOLOGY](#) [FUNDRAISING](#)

Reflections on Equity: Holding Up a Mirror to Organizational Practices

Monday, 4:00 PM - 5:30 PM

Centering equity requires organizations to recognize the inter-connectedness of internal operations and externally-focused work; there also exists a critical need to examine underlying



structures, policies, processes, and culture. Two organizations—CAISE, which conducted an internal Equity Audit, and NISE Network, which developed an equity-focused theory of change—will share their tools and frameworks, insights, and lessons learned from their process.

Presenters: **Alexandra Jackson**, *Director of Programs & Partnerships, Sciencenter*; **Cecilia Garibay**, *Principal, Garibay Group*; **Jamie Bell**, *CAISE, Project Director, Center for Advancement of Informal Science Education (CAISE)*; **Rabiah Mayas**, *Vice President, Education, Museum of Science and Industry*; **Rae Ostman**, *Associate Research Professor, School for the Future of Innovation in Society, Arizona State University*

Lightning Session: Across Generations

Monday, 4:00 PM - 4:45 PM

LIGHTNING SESSION: ACROSS GENERATIONS

Engaging Both Parents and Children Through Toddler Time

STEM LEARNING, EDUCATION, AND PROGRAMS

Toddler Time is not your typical early childhood museum program. It is a multifaceted program designed to instruct families on teaching children ages 3 and under through interactive play. Our primary goal is to involve parents in their toddlers' development and learning by demonstrating developmentally appropriate activities and teaching techniques.

Presenters: **Chad Fifer**, *Director of Education, Boonshoft Museum of Discovery*

Tags: EARLY CHILDHOOD ADULT ENGAGEMENT

Measuring STEM Engagement and Advocacy of Older Adults (50+)

STEM LEARNING, EDUCATION, AND PROGRAMS

Older adults are a growing segment of the informal STEM learning (ISL) population, yet how best to engage this group is unknown. Our work developed novel measures of STEM Engagement and Advocacy for older adults. We share key findings to inform the design of ISL experiences for this underserved population.

Presenters: **Sarah Olsen**, *Research Lead, Lawrence Hall of Science*; **Mac Cannady**, *Research Group Director, Lawrence Hall of Science*

Tags: ADULT ENGAGEMENT IMPACT MEASUREMENT

Ramp Up Fellowship: An Educator Pathway for 18-24-Year-Olds

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

What are the pathways for youth to become educators in their communities? Come learn about the Ramp Up Fellowship, a full-time program for individuals 18-24 years old who are interested in becoming teaching artists and prioritizes young adults who identify as BIPOC or LGBTQIA creatives.



what's next?

ASTC 2022 ANNUAL CONFERENCE

LIGHTNING SESSION: ADVANCEMENT &

Presenters: **Nina Marie Barbuto**, *Executive Director, Assemble*; **Erin Perry**, *Executive Director, The Legacy Arts Project*

Tags: 21ST CENTURY SKILLS ADULT ENGAGEMENT

Turning the Page on Storybook STEM: Diversity in Early Childhood Programs DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Diversity and inclusion begin with programs for the youngest museum visitors, who we hire to teach those programs, and how we welcome All families. Presenters will share how they address these questions in museum exhibits and outreach programs with hands-on techniques that help prepare children from diverse backgrounds for kindergarten.

Presenters: **Emily Lemonds**, *Early Childhood Manager, Saint Louis Science Center*; **Jill Coons**, *Director of Education, GrowingGreat*; **Madden Purcell**, *Public Programs Coordinator, Discovery Center at Murfree Spring*; **Brandon Barney**, *Explora*

Tags: EARLY CHILDHOOD DIVERSITY AND EQUITY

7:00 pm

Party at the Carnegie Science Center

Monday, 7:00 PM - 11:00 PM

FEE: \$12 (SUPPORTS ASTC NEW LEADERS PROGRAM)

We welcome you to Pittsburgh and to the Opening Night Party for the ASTC Annual Conference.

Explore, be entertained, and enjoy our amazing Carnegie Science Center.

- Sing your heart out and be dazzled with brilliant colors and rockin' music in our new Buhl Planetarium with laser jukebox karaoke.
- Take a journey through the human body with stops at the intestines, bones, and brain.
- Come aboard the *USS Requin* (SS 481) submarine to experience how 80 men used their expertise, humor, and ingenuity to carve out an adventurous life during defense and scientific missions.
- See live demonstrations and have an animal encounter with a special guest from Carnegie Museum of Natural History; try screen printing à la Andy Warhol; and play trivia in The





what's next?

ASTC 2022
ANNUAL CONFERENCE

- Rangos Giant Cinema, which boasts a 70-by 38-foot Certified Giant Screen and a Dolby Atmos surround sound system with 45 speakers.
- See a tiny version of the region at one of the most treasured and beloved spots in the museum - the Miniature Railroad & Village®, featuring hundreds of wonderfully realistic animated scenes from Pittsburgh and Western Pennsylvania.
 - Enjoy fabulous food and beverages from our chefs while you check out the best view in Pittsburgh from PointView Hall.
 - Explore the science of music and sound in the *GUITAR: The Instrument That Rocked The World* exhibition.
 - And don't forget to bring your dancing shoes to the Works Theater, where our DJs will keep the dance floor packed all night long.

The Carnegie Science Center XPLOR store is offering a 20% discount for ASTC badge holders throughout the conference, including Monday evening; the same offer is extended to conference badge holders from all four Carnegie Museums (The Andy Warhol Museum, Carnegie Museums of Art and Natural History, Carnegie Science Center) gift shops.

We look forward to seeing you at Carnegie Science Center for a great party.


CARNEGIE SCIENCE CENTER
ONE OF THE FOUR CARNEGIE MUSEUMS OF PITTSBURGH



what's next?

ASTC 2022
ANNUAL CONFERENCE

TUESDAY, SEPTEMBER 13, 2022

7:30 am

Registration

Tuesday, 7:30 AM - 5:00 PM

8:30 am

Tuesday Breakfast

Tuesday, 8:30 AM - 9:00 AM

9:00 am

Alan J. Friedman Science Center Dialogues

Tuesday, 9:00 AM - 10:30 AM

“Preparing the Public for Future Pandemics: Fostering Collaboration Between Research and Engagement”

The vaccines for the SARS-CoV-2 virus represent a milestone in scientific history as the shortest time from the identification of a novel virus to the development, testing, and mass distribution of a vaccine. At the same time, the adoption rates for the SARS-CoV-2 vaccines have presented stark lessons in the need for greater public understanding of, and engagement around vaccine safety, efficacy, and impact.

Scientists around the world are building on this success to prepare for the next pandemic and are striving to have future vaccines in 100 days—or less—but this timeline will only help if public uptake quickly follows.

Therefore, as researchers, health professionals, and innovators are investing in the science and technology required to combat the next pandemic, it is equally important that science engagement professionals ensure that the public is empowered to learn about, participate in, critically evaluate, and ultimately benefit from, those medical advancements. This session will explore the collaboration that is possible between researchers and science engagement



what's next?

ASTC 2022
ANNUAL CONFERENCE

professionals to ensure the scientific establishment, societal institutions, and individuals are all equally prepared for the next pandemic.

The Alan J. Friedman Science Center Dialogues are conducted in memory and tribute to the founding director of the New York Hall of Science, Queens. The session is presented in the spirit of the commitment Alan had to the science-center field and the issues and interests that were reflected in his own writings and presentations over the years.



Erica Kimmerling (dialogue moderator and discussion catalyst), *Senior Advisor for Science Engagement Policy, ASTC*



Jayatri Das, *Chief Bioscientist, The Franklin Institute*



Paul Duprex, *Director, Center for Vaccine Research, Jonas Salk Chair for Vaccine Research, and Professor of Microbiology and Molecular Genetics, University of Pittsburgh*

10:30 am

Exhibit Hall Open

Tuesday, 10:30 AM - 5:00 PM



Picture Yourself: Headshots in the Exhibit Hall

Tuesday, 10:30 AM - 5:00 PM

Attendees can get free photo headshots to update their LinkedIn profile or for other professional (or personal) use.



what's next?

ASTC 2022
ANNUAL CONFERENCE

Science Engagement Story Recording

Monday, 11:00 AM - 5:00 PM

NEAR REGISTRATION IN CONCOURSE B/C



How has science engagement had an impact on your life and career? ASTC, in conjunction with StoryHabitat, is gathering stories in preparation for ASTC's 50th anniversary celebration next year. What (or who) inspired you to get involved in science engagement? Is there a moment in science engagement you will never forget? What is the most meaningful project you have been a part of? Your story is part of our story together. Select stories will be featured as part of ASTC's 50th anniversary next year. Stop by to leave a quick recording or browse others' stories.

11:00 am

Build (Your Community) Back Better: Discovering Your Museum Superpowers to Enhance Community and Urban Planning

EXTERNAL GROUPS AND COLLABORATORS

Tuesday, 11:00 AM - 12:30 PM

Housing, transportation, climate resilience, and environmental justice are all part of your community's urban and regional plan. Great municipal planning requires robust community engagement and that's where we come in! In this session, learn about planning's flaws-and-all history and museum collaborations with planning agencies that literally reshape their communities' futures.

Presenters: **Betsy Loring**, *Principal, expLoring exhibits & engagement LLC*; **Brad Larson**, *President, Brad Larson Media, Inc.*; **Jeremy Hoffman**, *David and Jane Cohn Scientist, Science Museum of Virginia*; **Shawn Lani**, *Senior Artist: Curator of Outdoor Works, Exploratorium*

Tags: [COMMUNITY IMPACT](#) [CREATING A BETTER FUTURE](#)

Creating Volunteer Programs of Tomorrow: How Museums Are Improving Volunteer Support, Training, and Professional Development

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 11:00 AM - 12:30 PM

How are volunteer programs moving past the pandemic? Four institutions of different sizes and focus will show how they're revitalizing volunteer programs through equity, community, and technology. Then, through discussion groups, participants will explore volunteer development tools and brainstorm how we can build the volunteer programs of tomorrow together!

Presenters: **Billy Ernest**, *Education & Volunteer Coordinator, ECHO, Leahy Center for Lake Champlain*; **Corrie Macneil**, *Director of Daily Play, Marbles Kids Museum*; **Kimberly Griffiths**, *Volunteer Program Manager, Sciencenter*; **Sarah Irizarry**, *Head of Volunteer & Intern Services, North Carolina Museum of Natural Sciences*

Tags: [VOLUNTEER MANAGEMENT](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Developing Whole Institution Sustainability Projects for Science Centers and Museums

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 11:00 AM - 12:30 PM

This workshop will 1) highlight stories of successful sustainability efforts at museums, 2) describe the basics of planning a museum sustainability effort, including an introduction to the United Nations Sustainable Development Goals and successful strategies from research, and 3) allow participants to create sustainability project plans for their own institutions.

Presenters: **Karen Dewhirst**, *Science Manager, Creative Discovery Museum*; **Marci Howdyshell**, *Senior Director of Scientific Content and Research, COSI*; **Nicholas Weller**, *Postdoctoral Research Associate, Arizona State University - Center for Innovation in Informal STEM Learning*; **Shannon Earnest**, *Gallery Manager, Saint Louis Science Center*; **Simon Mused**, *Senior Exhibitions Manager, Scott Family Amazeum*

Tags: [CREATING A BETTER FUTURE](#) [SUSTAINABILITY](#)

Exploring U.S. Federal Funding Opportunities

ADVANCEMENT AND PARTNERSHIPS/FUNDRAISING

Tuesday, 11:00 AM - 12:30 PM

Representatives of several U.S. Federal agencies that support the science center and museum community will provide an overview of the funding opportunities available through their agencies and give tips and tricks for submitting a competitive funding proposal.

Presenters: **Adam Fagen**, *Director of Communications, Advocacy, and Engagement, ASTC*; **Helen Wechsler**, *Supervisory Senior Program Manager, Office of Museum Services, Institute of Museum and Library Services*; **Carrie McDougall**, *Senior Program Manager, Office of Education, National Oceanic and Atmospheric Administration (NOAA)*; **Meredith Hindley**, *Senior Program Officer, Division of Public Programs, National Endowment for the Humanities (NEH)*; **Representative of National Science Foundation, NASA, National Institutes of Health**

Tags: [FUNDRAISING](#) [GRANT WRITING](#)

Leadership in the Science Center, Garden, and Office: Empowering BIPOC Community and Organizational Leaders

LEADERSHIP

Tuesday, 11:00 AM - 12:30 PM

Join program directors from three museums and a Los Angeles-based non-profit for a hands-on exploration of how STEM and garden programming can empower BIPOC youth leaders. Presenters will provide frameworks for planning and implementing programs that align with organizational DEAI priorities and for creating lasting and sustainable community partnerships.

Presenters: **D'Nae Hearn**, *Education Specialist, Detroit Zoological Society*; **Lauren Patrick**, *Senior Educator, Saint Louis Science Center*; **Meghan Nealon**, *STEM Program Director, GrowingGreat*; **Molly Porter**, *Natural History Museums of Los Angeles County*

Tags: [DIVERSITY AND EQUITY](#) [SCIENCE EDUCATION](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Leveraging the "Ladder of STEM Engagement to Ownership" to Build More Equitable Outcomes

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Tuesday, 11:00 AM - 12:30 PM

Community-driven science is at the heart of equity and engagement. Reimagining what this work looks like is key to driving real systemic change. Join us to explore models for community engagement to ownership, identify your organization's current standing, and envision opportunities for deeper work towards equity.

Presenters: **Caitlin Everhart**, *Project Manager, Explora*; **Eric Meyer**, *Assistant Director of Education, Fleet Science Center*; **Prinda Wanakule**, *Senior Director of Inclusive Research, Development and Impact Measurement, The Tech Interactive*

Tags: [COMMUNITY IMPACT](#) [DIVERSITY AND EQUITY](#)

Pay, Play, or Get Paid: What Role Should Teens Have in Museums?

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Tuesday, 11:00 AM - 12:30 PM

Many museums offer resume-building opportunities for teens, including fee-based programs, paid internships, and unpaid volunteer positions. What determines who gets paid for their time? Come explore guidelines for how to make ethical and financially sustainable choices that promote diversity, equity, inclusion, and access (DEIA), social justice, and career advancement for youth in teen programs.

Presenters: **Juanita Juarez**, *Exhibit Coordinator, California Science Center*; **Kristen Denton**, *Manager of Community and Exhibit Programs, California Science Center*; **Laura Herszenhorn**, *Director of Expanded Learning and Youth Engagement, California Academy of Sciences*; **Nick Martinez**, *Assistant Director of Youth Initiatives, American Museum of Natural History*; **Rich Pennington**, *Project Lead/Asst KAYSC, Science Museum of Minnesota*

Tags: [INCLUSIVE WORKFORCE DEVELOPMENT](#) [TEEN PROGRAMS](#)

Prototyping With Pens, Paper, and Play: An Interactive Session on Testing Early Exhibit Designs

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Tuesday, 11:00 AM - 12:30 PM

It's critical to know our that exhibit designs will engage our visitors before we build them. Playtesting experiences early in the design process allows us to check assumptions and uncover unexpected insights. In this session, we'll explore this as participants step into the shoes of visitors and prototype an exhibit experience.

Presenters: **Isabel Singer**, *Senior Exhibit Developer, Luci Creative*; **Justin Aglio**, *Senior Director, Sam Moore*, *Executive Director, Moonshot Museum*; **Tim Boutelle**, *Richard Lewis Media Group*

Tags: [K-12 SCHOOL COLLABORATION](#) [PROTOTYPING AND PILOTING](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

STEM Teens: Engaging Teens and Visitors in STEM Learning Through Youth Programs

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 11:00 AM - 12:30 PM

Using Pecha Kucha style presentations, leaders from informal science learning sites in the United States and the United Kingdom will center the discussion on site-based youth educator programs. Following these visual presentations, attendees will engage a speed networking event focused on topics related to sustainable youth programming.

Presenters: **Hermorre Shica Mcconner**, *EdVenture Children's Museum*; **Laurence Butler**, *Education Officer*; **Leslie Clements**, *Equity, Community, & Learning, Virginia Aquarium and Marine Science Center*; **Marc Drews**, *Director of Operations, EdVenture Children's Museum*; **Mengya Zhao**; **Myfanwy-Cerys Williams**

Tags: [PARTNERSHIPS](#) [SCIENCE EDUCATION](#)

What Listening Looks Like

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Tuesday, 11:00 AM - 12:30 PM

How do you be a good listener? Two organizations share their efforts to advance diversity, accessibility, inclusion, and equity commitments by listening to both internal staff and external communities. Attendees will gain knowledge of the key elements of effective listening and discuss how to apply these elements at their organizations.

Presenters: **Ann Hernandez**, *Education Leadership Program Manager, Space Center Houston*; **Gregory Germain**, *Associate Director of Individual Giving, Space Center Houston*; **Kristin Leigh**, *Deputy Director, Explora*; **Lauren Holley**, *Audience + Evaluation Manager, Space Center Houston*; **Shane Montoya**, *Director of Exhibits, Floor Experience, and Operations, Explora*

Tags: [DIVERSITY AND EQUITY](#) [PARTNERSHIPS](#)

SPONSORED SESSION

Interactive STEM Traveling Exhibitions

Tuesday, 11:00 AM – 12:00 PM

EXHIBIT HALL STAGE

Join Scitech and Imagine Exhibitions to learn more about highly interactive, STEM-based exhibitions in a fun, interactive, and informative presentation. Discover how visitors can colonize a new home planet with *Planet Pioneers*, explore our changing planet with *Earth Matters*, and navigate the globe with *Map It!*



Sponsored by Imagine Exhibitions



Lightning Session: Youth & Technology

Tuesday, 11:00 AM - 11:45 AM

LIGHTNING SESSION: YOUTH & TECHNOLOGY

Dancing the Milky Way and Drawing Dinosaurs: Interactive Programming for Youth That Unites Scientists and Artists

STEM LEARNING, EDUCATION, AND PROGRAMS

Art is an incredibly powerful medium for making science relevant. Come explore how co-designing digital programs with artists and scientists around a theme can produce interactive and engaging programming that makes science more accessible and broadens the concept of who does science and how it connects in surprising ways.

Presenters: **Jennifer Collins**, *Manager in the Office of Education, Outreach, and Visitor Experience, National Museum of Natural History*, **Nicole Webster**, *Manager of School and Youth Programs, National Museum of Natural History*

Tags: PARTNERSHIPS SCIENCE EDUCATION

Leveraging New Research to Build Incredible STEAM Outreach Experiences for Girls and BIPOC Learners

STEM LEARNING, EDUCATION, AND PROGRAMS

Presenters: **Alaina Rutledge**, *VP of Education R&D, National Inventors Hall of Fame*

Tags: DIVERSITY AND EQUITY K-12 SCHOOL COLLABORATION

STEM Workforce Stories for Adolescents Who Are Deaf or Hard of Hearing (SWS)

STEM LEARNING, EDUCATION, AND PROGRAMS

This session will highlight innovative features of eight universally designed video career stories told by STEM professionals who are deaf or hard of hearing. It will use research-based findings to show how they benefit deaf or hard of hearing learners by expanding their STEM career knowledge and knowledge of STEM.

Presenters: **Judy Vesel**, *Principal Investigator, TERC*

Tags: DIVERSITY AND EQUITY INCLUSIVE WORKFORCE DEVELOPMENT

Youth Lead the Way: Museums Learning With and From Youth to Advance Climate Action

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

This session will provide an overview of an exploratory research study that created and implemented an innovative Youth Advisory Research Board (YARB), a model that combines Youth Participatory Action Research and Youth Advisory Boards. The session will explore the empowerment theory-based model, the programming, and some results with youth input.



what's next?

ASTC 2022
ANNUAL CONFERENCE

LIGHTNING

Presenters: **Todd Shagott**, *Research and Evaluation Data Systems Coordinator, Oregon Museum of Science and Industry*, **Cyrus Lyday**, *Teen Engagement Educator, Oregon Museum of Science and Industry*, **Fabiana Barrientos**; **Rebecca Reilly**, *Food Science Educator, Oregon Museum of Science and Industry*, **August Shin**

Tags: CLIMATE CHANGE TEEN PROGRAMS

12:30 pm

Reconnect, Recharge, Refocus

Tuesday, 12:30 PM - 2:00 PM

Pick up your lunch in the exhibit hall and participate in one of the many activities from roundtable discussions—to opportunities to move and play—to a sneak peek of a new science film.

Birds of a Feather Conversations

Tuesday, 12:30 PM - 2:00 PM

Grab your lunch and join or start a casual conversation with like-minded individuals for around the following topics or suggest a new topic!

Conversations around conference themes:

- **Addressing Inequities**
- **Confronting Climate**
- **Future Forward**
- **Evolving our Organizations**
- **Informal Learning**

Other conversation areas:

- **Early Childhood Community of Practice**
- **Independent Museum Professionals**
- **Marketing Professionals**
- **Community Science Fellow**
- **New Leaders Fellows**
- **Your topic!**



ONLY CONNECT: Bridging Science, Art and Spirituality: an interactive presentation and film preview

Tuesday, 1:00 PM - 2:00 PM

Alan Lightman is an MIT astrophysicist and a best-selling novelist (*Einstein's Dreams*) and science communicator. At ASTC he'll preview (for the first time in public!) clips from *SEARCHING: Our Quest*



what's next?

ASTC 2022
ANNUAL CONFERENCE

for *Meaning in the Age of Science*, a mini-series premiering on PBS stations in 2023. *SEARCHING* shows how both the humanities and science illuminate our place in the universe and dramatizes our connection to the stars and to all living creatures, on Earth and elsewhere. Along with Geoff Haines-Stiles (producer/director of Carl Sagan's original *COSMOS*), Alan will share—via interactive polling—provocative insights into contemporary research and the public understanding of science.

Presenters: **Alan Lightman**, *Professor of the Practice of the Humanities, Massachusetts Institute of Technology*, **Geoffrey Haines-Stiles**, *Producer/Director/Co-writer, SEARCHING*

Silent Disco

Tuesday, 1:00 PM - 2:00 PM

EXHIBIT HALL STAGE

Grab some headphones and shake it off! DJ Cake is spinning your favorite dance tracks to get the blood flowing and the body moving!



Sensory Withdrawal for Creatives: A Movement + Meditation Practice

Tuesday, 1:15 PM - 2:00 PM

Encourage balance to the nervous system during this 40-minute movement and meditation workshop for life's busy moments. This all-levels class includes yoga asana and stillness practices to invite creativity on and off the mat.

Guests are invited to be fully present in their bodies and explore the natural ability to cultivate intuition and creativity through sensory withdrawal. Prepare for this gentle session by coming as you are, wearing clothes that invite free movement. Mats will be provided.

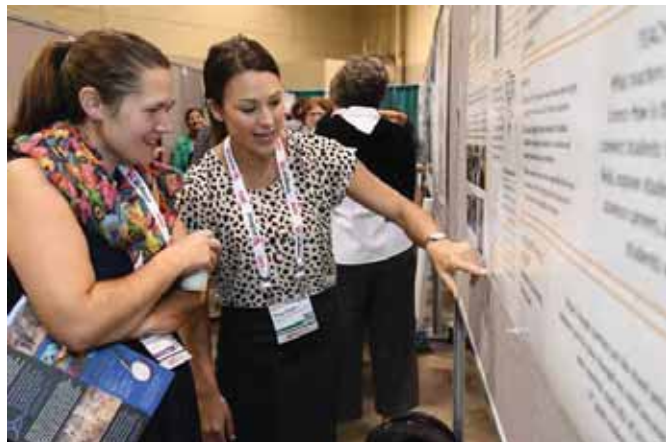


2:00 pm

Poster Palooza

Tuesday, 2:00 PM - 3:15 PM

See the list of posters beginning on page 61.





what's next?

ASTC 2022
ANNUAL CONFERENCE

Meet the Moment – Sharing our Collective Work on Climate Change

Tuesday, 2:00 PM - 3:15 PM

Join your colleagues working on climate change education to share information, learn from each other and network. This is an informal opportunity supported by ASTC. We will have display-boards and 4-6 ft tables available for each museum/organization. Please bring a poster-size summary, handouts, small interactives, works in progress or anything else others may find useful learning about your work and sharing with colleagues.

This is a great opportunity to elevate our collective work in the ASTC community and invite others to join in the work. Feel free to share this with anyone who might be interested in participating/networking - everyone is welcome!

We need your participation! If you would like to join this effort, please [RSVP HERE](#) so we know you will participate so we can continue to plan with ASTC.

Conveners: **Stephanie Ratcliffe**, *Executive Director, The Wild Center*, **Jen Kretser**, *Director of Climate Initiatives, The Wild Center*

Tags: [CLIMATE CHANGE](#)

3:30 pm

Building Lasting Community Partnerships

[EXTERNAL GROUPS AND COLLABORATORS](#)

Tuesday, 3:30 PM - 5:00 PM

Developing long-lasting and meaningful relationships with other organizations can be a daunting task. Learn from three successful partnerships with representatives from both the science center and their partner organization. Whether from urban, rural, or tribal communities, you'll take away helpful and replicable lessons for you to apply at your institution.

Presenters: **Imani Vincent**, *Schoolhouse Teacher*, **Jessie Herbert-Meny**, *Director, spectrUM Discovery Area*, **Max Cawley**, *Associate Program Manager - Learning Philosophy & Evaluation, Museum of Life and Science*, **Peter Leipzig**, *Education Program Coordinator, Sciencenter*, **Yanet Lopez**, *Community Engagement Manager, Fleet Science Center*

Tags: [COMMUNITY IMPACT](#) [PARTNERSHIPS](#)

Does the Real Thing Matter? Making Sense of Authenticity in Informal Science Learning

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 3:30 PM - 5:00 PM

Does it really need to be REAL? Join us as we explore the role of authenticity in informal science learning via panel and small-group discussion, examining what research says about how the 'the



what's next?

ASTC 2022
ANNUAL CONFERENCE

real thing' (vs. replica or virtual experience) may or may not influence learner attitudes, behaviors and understanding.

Presenters: **Benjamin Dickow**, *President & Executive Director, Columbia Memorial Space Center*; **Evelyn Serrano**, *Educator, California Science Center*; **James Kisiel**, *Professor of Science Education, California State University, Long Beach*; **Marcie Benne**, *Engagement Research and Advancement Director, Oregon Museum of Science and Industry*; **Preeti Gupta**, *Senior Director of Children and Youth Programs, American Museum of Natural History*; **Kimberly Preston**, *Researcher, Oregon State University STEM Research Center*; **Martin Storksdieck**, *Director, Oregon State University STEM Research Center*

Tags: [EXHIBIT DESIGN](#) [SCIENCE EDUCATION](#)

Dream It, Plan It, Evaluate It: Inspiring Equity in STEM Environments

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 3:30 PM - 5:00 PM

Organizations are focused now more than ever on prioritizing equity and inclusion; however, many are struggling to find time to adapt programming. This workshop provides the time and tools to envision more equitable and sustainable STEM offerings using the Equity and Inclusion Framework created by the National Girls Collaborative Project.

Presenters: **Karen Peterson**, *CEO, National Girls Collaborative Project*; **Shihadah Saleem**, *Director of Youth Programs and Pathways, New York Hall of Science*; **Tara Cox**, *Assistant Director of Programs, National Girls Collaborative Project*

Tags: [DIVERSITY AND EQUITY](#) [SOCIAL JUSTICE](#)

Forward to the Future: How Innovation Drove the Creation of the Museum of the Future

Tuesday, 3:30 PM - 5:00 PM

Museum of the Future opened in Dubai 2-22-2022 to international acclaim and sold-out tickets. The founding team will show how they used the most innovative practices in the field to drive this success and build a truly unique organization. Areas of focus will be community building, co-creation, inclusion, diversity, sustainability, data, and fun!

Presenters: **Lāth Carlson**, *Executive Director, Museum of the Future*; **Majed Al Mansoori**, *Deputy Executive Director and Head of Project Management, Museum of the Future*; **Sarah Sillow**, *Director of Operations, Museum of the Future*

Tags: [INCLUSIVE WORKFORCE DEVELOPMENT](#) [SUSTAINABILITY](#)

Inspiring Youth to Climate Action with GenAction

[EXTERNAL GROUPS AND COLLABORATORS](#)

Tuesday, 3:30 PM - 4:15 PM

With the support of the Canadian Federal Government's Environmental Damages Fund, the Canadian Association of Science Centres along with partners Discovery Centre (Halifax, Nova



what's next?

ASTC 2022
ANNUAL CONFERENCE

Scotia), Science North (Sudbury, Ontario) and Exploration Place (Prince George, British Columbia) have formed a network of over 29 science centres, museums, and outreach organizations to deliver the high impact Inspiring Youth to Climate Action project coined GenAction. Representatives from these organizations will present the national outreach program which will deliver hands-on, locally relevant activities grounded in community-based climate change research, while tracking expected change in awareness and behaviour modification of participants in every province in Canada.

In this session, you will gain insight into the sliding scale, flow-through grant mechanism established by the collective partnership, along with research tools and the community of practice developed specifically for the GenAction movement. Presenters will also have you exploring ways to engage youth in climate change programming and how to convert this education into ACTION.

Presenters: **Stephanie Deschenes**, COO, Canadian Association of Science Centres, **Julie Moskalyk**, Science Director, Science North, **Jennifer Punch**, Director of Marketing & Communication, Discovery Centre

Tags: [CLIMATE CHANGE](#) [YOUTH DEVELOPMENT](#)

This session has been organized by the Canadian Association of Science Centres.



Prioritizing Equity: A DEAI Dialogue for All

[DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE](#)

Tuesday, 3:30 PM - 5:00 PM

In this interactive session, museum professionals will discuss the current opportunities and challenges museums face on their equity journeys. Following initial framing by a national funder and results from a national survey, participants will collectively identify fieldwide needs and brainstorm potential resources to support diversity, equity, access, and inclusion (DEAI) efforts in the museum field.

Presenters: **Cecilia Garibay**, Principal, Garibay Group, **Jenni Martin**, Director of Strategic Initiatives, Children's Discovery Museum of San Jose, **Laura Huerta Migus**, Deputy Director, Office of Museum Services, Institute of Museum and Library Services

Tags: [DIVERSITY AND EQUITY](#) [REBUILDING AND REIMAGINING](#)

The Future of Professional Learning: Brainstorming Solutions for Professional Development Problems in a Post-pandemic World

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 3:30 PM - 5:00 PM

Educators are facing some of the most difficult situations of their careers, who has time for professional learning? Join our panel of professional learning advocates for a future thinking brainstorm session around critical staff development and professional learning strategies that will support all education professionals in our communities.



what's next?

ASTC 2022
ANNUAL CONFERENCE

Presenters: **Lynn Tran**, *Program Director, National Science Foundation*; **Megan Ennes**, *Assistant Curator of Museum Education, Florida Museum of Natural History*; **Nikole Sheaffer**, *Senior Director of STEM Education, Carnegie Science Center*; **Sarah Soule**, *Teacher and Student Services Educator, California Academy of Sciences*; **Sherry Burch**, *Senior Manager of Education Resources, The Tech Interactive*

Tags: [FUTURE PLANNING](#) [TEACHER PROFESSIONAL DEVELOPMENT](#)

Under the Umbrella of Co-designing and Iteration

[EXHIBITS, EXPERIENCES, AND TECHNOLOGY](#)

Tuesday, 3:30 PM - 5:00 PM

In this session, we will explore cross-departmental collaborative processes used with floor staff to co-design and iterate STEAM activities and exhibits at New York Hall of Science and The Tech Interactive. Participants will leave with strategies on how to incorporate co-design into their institution to create more robust experiences for visitors.

Presenters: **James Wong**, *Content Specialist, The Tech Interactive*; **Leah Persram**, *Exhibit Associate, New York Hall of Science*; **Michaela Yamashita**, *R&D Specialist, The Tech Interactive*; **Satbir Multani**, *Exhibit Experience Manager, New York Hall of Science*

Tags: [EXHIBIT DESIGN](#) [FUTURE PLANNING](#)

Unpacking Immersion in Museums

[EXHIBITS, EXPERIENCES, AND TECHNOLOGY](#)

Tuesday, 3:30 PM - 5:00 PM

Presenters: **Cloe St-Cyr**; **Mike Lutz**, *VP of New Business Development, Evans & Sutherland Computer Corporation*; **Stacy Wakeford**, *Director, Content*; **Tim Porter**, *Director, Exhibit Content & Project Management, Museum of Science*

Tags: [EMERGING TECHNOLOGY](#) [EXHIBIT DESIGN](#)

Whose Impact Is It Anyway? Exploring What Counts As Impact, Who Decides, and Its Measurement

[DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE](#)

Tuesday, 3:30 PM - 5:00 PM

Impact. It's a word that many of us look at with fear and trepidation. What counts as impact? Which stakeholders decide? How do we go about measuring it? Join us as we candidly discuss experiences of defining and measuring impact within organisations and across the field.

Presenters: **Bethan Ross**, *International Centre for Life*; **Jennifer DeWitt**, *Senior Research Fellow, University College London*; **Marjorie Bequette**, *Director, Evaluation & Research, Science Museum of Minnesota*; **Ryan Auster**, *Manager, COVES & Learning Metrics, Museum of Science and The Collaboration for Ongoing Visitor Experience Studies (COVES)*

Tags: [IMPACT MEASUREMENT](#) [PROGRAM EVALUATION](#)



Lightning Talk: Exhibits & Programming

Tuesday, 3:30 PM - 4:15 PM

LIGHTNING SESSION: EXHIBITS & PROGRAMMING

Full Bellies and Brains: STEM Programs and Food-Insecure Audiences

STEM LEARNING, EDUCATION, AND PROGRAMS

Cincinnati Museum Center leads an NSF grant exploring cooking as a gateway to STEM learning for audiences that include those experiencing food insecurity. Learn what's worked (and not) and tips for working with food-insecure audiences.

Presenters: **Whitney Owens**, *Chief Learning Officer, Cincinnati Museum Center*

Tags: [CREATING A BETTER FUTURE](#) [LEARNING RESEARCH](#)

Pop-Up Exhibits and Alternative Venues: Reaching New Audiences With Temporary Exhibition Spaces

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Ready to reach out? We'll share lessons learned from Virtual Science Center's daring experiment--popping up our hands-on science exhibit in a Westfield Shopping Center in San Jose. We'll share hurdles encountered from building permits, hiring and stagnant weekday mall traffic to moments of sheer joy and reaching new audiences.

Presenters: **Meghan Lee**, *Executive Director, Virtual Science Center*

Tags: [REBUILDING AND REIMAGINING](#) [FUTURE PLANNING](#)

Transforming Hands-On Exhibits to Intelligent Mixed-Reality Experiences to Enhance STEM Learning and Engagement

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Intelligent Science Exhibits use an innovative Artificial Intelligence (AI)-based mixed-reality technology, to provide personalized interactive feedback to visitors as they do experiments and discoveries in the real world, improving STEM learning and engagement in the museum, while also encouraging 21st century skills like critical thinking, persistence and collaboration.

Presenters: **Nesra Yannier**, *Senior Systems Scientist, Human-Computer Interaction Institute, Carnegie Mellon University*, **Christine Simonson**, *Director of Gallery Experiences, Carnegie Science Center*

Tags: [ADVANCED TECHNOLOGY \(AUGMENTED REALITY \(AR\), VIRTUAL REALITY \(VR\), ETC.\)](#) [EXHIBIT DESIGN](#)

Film: *Not the Science Type*

Monday, 3:30 PM - 4:00 PM

EXHIBIT HALL STAGE



what's next?

ASTC 2022
ANNUAL CONFERENCE

Not The Science Type highlights four brilliant minds, showcasing women who break down boundaries within their fields – biology, engineering and science and technology-based applications. (Also shown Monday at 3:30 PM)

7:00 pm

Party at the Children's Museum of Pittsburgh and MuseumLab

Tuesday, 7:00 PM - 11:00 PM

FEE: \$12 (SUPPORTS ASTC NEW LEADERS PROGRAM)

Explore the largest cultural campus for kids in North America and enjoy an evening of food, drink, and unique activities!

Try nontraditional artmaking in the Children's Museum's Art Studio - paint in the air, make prints with bikes and create a giant screen print.

Let your inner maker go big in MAKESHOP with a giant sewing machine, loom, and large geometric structures.

Check out the Kindness Gallery, the Garage (former home of the original Buhl Planetarium) and our latest traveling exhibit, *Measurement Rules*.

Next door at MuseumLab, dive into fashion and your identity in *How You Wear It*, and make your own enameled medallion in our Metals Studio. Then take a break under the stars in Buhl Community Park to make steamroller prints and dance in our silent disco.

Buses to the Children's Museum of Pittsburgh depart starting at 6:30 p.m. from the official ASTC Annual Conference hotels. Preregistration required for guests aged 21+.



Photo by Ed Massery

children's
museum.
pittsburgh

museumlab.



what's next?

ASTC 2022
ANNUAL CONFERENCE

WEDNESDAY, SEPTEMBER 14, 2022

7:30 am

Registration

Wednesday, 7:30 AM - 5:00 PM

8:30 am

Wednesday Breakfast

Wednesday, 8:30 AM - 9:00 AM

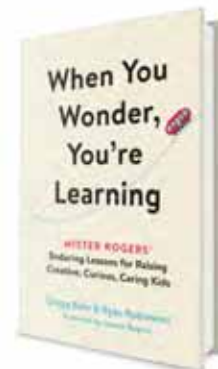
9:00 am

Wednesday Keynote

Wednesday, 9:00 AM - 10:15 AM

“When You Wonder, You’re Learning”

It wouldn't be trip to Pittsburgh without taking some time to learn from the legacy of Fred Rogers of the beloved television series *Mister Rogers' Neighborhood*. Join the authors of *When You Wonder, You're Learning*, Gregg Behr and Ryan Rydzewski, as they discuss how Fred Rogers' inspiring lessons about curiosity, creativity, and collaboration—to name just a few—are celebrated in the work that science and technology centers, museums, and science engagement professionals everywhere do every day to help people wonder, learn, and create.



Gregg Behr, Executive Director, The Grable Foundation



Ryan Rydzewski



what's next?

ASTC 2022
ANNUAL CONFERENCE

Presenting of Roy L. Shafer Leading Edge Awards

During the final keynote session, we will also highlight the work of our field over the past three years by announcing winners of this year's Roy L. Shafer Leading Edge Awards that recognize some of the incredible work of ASTC members.



Hands-On Science Showdown

Wednesday, 9:00 AM - 1:30 PM

HELD ON THE RACHEL CARSON BRIDGE

See description at 12:00 pm



10:30 am

15 Years of Remaking Learning in Pittsburgh: How to Start, Scale, and Sustain Learning Ecosystems

EXTERNAL GROUPS AND COLLABORATORS

Wednesday, 10:30 AM - 12:00 PM

In a city known for reinventing itself, Pittsburgh and its Remake Learning network are forging a new kind of education—one in which the region is a classroom. This session will provide insights from 15 years of network building to support others in starting, scaling, and sustaining learning ecosystems.

Presenters: **Andre Samuel**, *Pittsburgh Regional STE(A)M Ecosystem Lead*; **LaTrenda Leonard Sherrill**, *Working Group Strategist*; **Stephanie Lewis**, *Director of Relationships*; **Tyler Samstag**, *Director, Remake Learning Network*

Tags: [21ST CENTURY SKILLS](#) [PARTNERSHIPS](#)

Business Development + Experience Design: It's Time to ACT!

OPERATIONS, MARKETING, AND BUSINESS DEVELOPMENT

Wednesday, 10:30 AM - 12:00 PM

The time is NOW! Please join us for a timely discussion focused on how science centers rebuild their reputations a valuable community resources post pandemic through innovative,



what's next?

ASTC 2022
ANNUAL CONFERENCE

entrepreneurial approaches that result in a more engaging and revenue generating visitor experience.

Presenters: **Abigail Bysse**, *Vice President, Experiences and Business Development, The Franklin Institute*; **Dan Picard**, *Principal Creative Director, Hotopp Associates*; **Kellen Nixon**, *Nixon & Co.*

Tags: [BUSINESS DEVELOPMENT](#) [EXHIBIT DESIGN](#)

Care Circles: The Future of Governance & Engagement

[EXTERNAL GROUPS AND COLLABORATORS](#)

Wednesday, 10:30 AM - 12:00 PM

Presenters: **Todd McMullin**, *Dir. Strategic Relations, VSysOne.com*

Tags: [21ST CENTURY SKILLS](#) [ADULT ENGAGEMENT](#)

Go Where the People Are and Do What the People Do: Experimenting With Situated Engagement

[EXTERNAL GROUPS AND COLLABORATORS](#)

Wednesday, 10:30 AM - 12:00 PM

From neighborhood gatherings to parades, open-air markets to fantasy conventions, communities always get together on their own terms. What would it look like if you put down your usual bag of science tricks and joined in? Learn about our experiences with prioritizing cultural context with the practice of situated engagement.

Presenters: **Becky Carroll**, *Senior Researcher*; **Ben Wiehe**, *Manager, MIT Museum*; **Benjamin Dickow**, *President & Executive Director, Columbia Memorial Space Center*; **Emily Rice**; **Paul Martin**, *Co-Director, Arizona State University - Center for Innovation in Informal STEM Learning*

Tags: [COMMUNITY IMPACT](#) [REBUILDING AND REIMAGINING](#)

Imagination in STEM: Research, Practice, and Visions for the Future

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Wednesday, 10:30 AM - 12:00 PM

How can our work more intentionally spark imagination among learners and within ourselves? This panel discussion will present research on imagination in STEM, highlight case studies from informal STEM projects that leverage strategies for fostering imagination, and will invite attendees to envision imagination-infused STEM futures.

Presenters: **Rachel Fyler**, *Museum of Science*; **Karri Folks**, *Museum of Science*; **Sarah May**, *Evaluation Associate, Museum of Science*; **Amanda Krantz**, *Senior Research Associate, Kera Collective*; **Adrienne Testa**, *Director of Exhibits & Facilities, Sciencenter*

Tags: [DESIGN THINKING](#) [LEARNING RESEARCH](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Organizational Structures and Processes for Achieving Your Goals

LEADERSHIP

Wednesday, 10:30 AM - 12:00 PM

Leadership roles in science centers demand creativity, responsiveness, and structures. Hear about the decision-making processes that allow leaders to navigate challenging situations and progress in key areas of personal and institutional importance. Use these examples to reflect on areas you want to improve. Leave ready to take the next steps.

Presenters: **Catherine Horne**, *President and CEO, Discovery Place*; **Christian Greer**, *President and CEO, Michigan Science Center*; **Erica Barrueto**, *Assoc. Vice President, Learning Product Development, The Tech Interactive*; **Katrina Stevens**, *President and CEO, The Tech Interactive*; **Natalie Daring**, *Science Engagement Director, International Centre for Life*

Tags: [MANAGEMENT](#) [REBUILDING AND REIMAGINING](#)

Reengineering Your Brand to Maximize Engagement

OPERATIONS, MARKETING, AND BUSINESS DEVELOPMENT

Wednesday, 10:30 AM - 12:00 PM

The objectives of a rebranding project are to reimagine and reengineer to transform your brand to grow brand equity, increase awareness, create an emotional connection with stakeholders and visitors, and ultimately enhance revenue and engagement. In this session you will explore the journey of two major recent rebranding projects.

Presenters: **Erik Blanchard**, *Director of Communications and Marketing*; **Mara Naiditch**, *AVP Marketing and Enterprise, Natural History Museums of Los Angeles County*

Tags: [FUTURE PLANNING](#) [MARKETING](#)

Working Across Dimensions: DEAI Tools and Practices

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Wednesday, 10:30 AM - 12:00 PM

Actionable Insights from the Cultural Competency Learning Institute National Landscape Study grouped diversity, equity, access, and inclusion (DEAI) practices in museums into four dimensions: public facing, internal, foundational, and cross-functional. Presenters will share examples, tools, and resources aligned with the actionable insights. Attendees will take part in activities they can apply in their own organizations.

Presenters: **Alexandra Jackson**, *Director of Programs & Partnerships, Sciencenter*; **Cecilia Nguyen**, *Senior Exhibit Developer, Oregon Museum of Science and Industry*; **Eric Buenrostro Azua**, *Vice President of People and Culture, Oregon Museum of Science and Industry*; **Kevin Perez**, *Camp Manager, Terry Lee Wells Nevada Discovery Museum*; **Michelle Mileham**, *Project Manager, Utah Division of Arts & Museums*

Tags: [DIVERSITY AND EQUITY](#)



Lightning Session: Technology & Museums

Wednesday, 10:30 AM - 11:15 AM

LIGHTNING SESSION: TECHNOLOGY & MUSEUMS

Designing Augmented Reality That Supports Family Conversation

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Augmented Reality (AR) is an increasingly popular educational technology in museum spaces that blends virtual and real life experiences. We share key insights for developing “family-friendly” AR exhibits based on a review of prior work and our own development of an AR exhibit designed to promote family conversation - Bugtopia.

Presenters: **Sarah Olsen**, *Research Lead, The Lawrence Hall of Science*

Tags: [ADVANCED TECHNOLOGY \(AUGMENTED REALITY \(AR\), VIRTUAL REALITY \(VR\), ETC.\)](#) [EXHIBIT DESIGN](#)

Quantum Computers in the Museum? Introduction, Activities, & Why Your Visitors Will Care

STEM LEARNING, EDUCATION, AND PROGRAMS

How might quantum transform our lives? How can you bring these ideas to your museum audiences? We will introduce visual and auditory demonstrations of quantum ideas such as superposition and entanglement; zines introducing 15 quantum ideas; and hands-on activities on reversibility, exponential growth, one-way functions, destructive/non-destructive testing, and error correction.

Presenters: **Alexandria Muller**, *Graduate Student Researcher, University of California, Santa Barbara*; **Randy Landsberg**

Tags: [SCIENTIFIC RESEARCH](#) [PUBLIC PROGRAMS](#)

STEM Learning in the World of Metaverse

STEM LEARNING, EDUCATION, AND PROGRAMS

Presenters: **Habib Ab Mukmin**, *Head of Digital Strategy & Planning, Petrosains, The Discovery Centre*

Tags: [ADVANCED TECHNOLOGY \(AUGMENTED REALITY, VIRTUAL REALITY \(VR\), ETC.\)](#) [EMERGING TECHNOLOGY](#)

The Goggles, They Do Nothing! What Actually Works in the Overhyped World of Augmented Reality?

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

VR/AR/IR exhibits tend to be complicated, expensive, staff-intensive, and underwhelming. Disentangling ourselves from the virtual reality marketing machine, I will find common threads in exhibits that work, and explore how more modest, homebrew exhibits are distinguishing themselves from better-funded boondoggles that dominate the market.

Presenters: **Lucas Fredericks**, *Exhibit Fabricator, Sciencenter*

Tags: [ADVANCED TECHNOLOGY \(AUGMENTED REALITY \(AR\), VIRTUAL REALITY \(VR\), ETC.\)](#) [EXHIBIT DESIGN](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

12:00 pm

Hands-on Science Showdown

Wednesday, 12:00 PM - 1:30 PM

HELD ON THE RACHEL CARSON BRIDGE



A unique event that will engage hundreds of students from the Pittsburgh area.

Here's just some of what you can experience at this special event:

- Experience demonstrations by colleagues from around the country in the demo zone. Vote on your favorite!
- Explore activities by local Pittsburgh organizations who showcase making, tech, and more
- Performances by [Squonk Opera](#) at 11:00 AM and 12:30 PM
- Steamroller prints
- [PNC Mobile Learning Adventure](#)
- Food trucks for the best of Pittsburgh's cuisine



Lunch is included for conference participants from local food trucks at the Hands-on Science Showdown from 10:30 to 1:30.



what's next?

ASTC 2022
ANNUAL CONFERENCE

1:45 pm

Centering Participant Voice: Research Approaches That Emphasize Co-creation, Agency, and Belonging

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 1:45 PM - 3:15 PM

Participatory research can illuminate participant perspectives that might have otherwise gone unexamined. For this panel, researchers will discuss projects in which the participant voice is centered through non-traditional research methods. Attendees will gain an understanding of the implications of using participant-centered methodologies for data collected, inferences made, and participant-researcher relationships.

Presenters: **Gabrielle Rappolt-Schlichtmann**, *Executive Director & Chief Scientist, EdTogether*, **Preeti Gupta**, *Senior Director of Children and Youth Programs, American Museum of Natural History*, **Sarah Lukwoski**, *Evaluation and Research Associate, Science Museum of Minnesota*, **Sarah May**, *Evaluation Associate, Museum of Science*

Tags: [DIVERSITY AND EQUITY](#) [LEARNING RESEARCH](#)

Connecting Museums and Libraries to Promote Community Engagement in Citizen Science

EXTERNAL GROUPS AND COLLABORATORS

Wednesday, 1:45 PM - 3:15 PM

Are you interested in partnering with your local library to increase engagement in citizen science? Join SciStarter, Arizona State University, and the National Girls Collaborative Project to learn about the National Citizen and Community Science Library Network, and the suite of free resources designed to broaden participation in science engagement.

Presenters: **Darlene Cavalier**, *Director, SciStarter*, **Deron Ash**, *Assistant Director of Programs, Arizona State University - Center for Innovation in Informal STEM Learning*, **Lisa Lewis**; **Tara Cox**, *Assistant Director of Programs, National Girls Collaborative Project*

Tags: [COMMUNITY IMPACT](#) [PARTNERSHIPS](#)

Demystifying Engineering for Teachers, Parents and Preschoolers

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 1:45 PM - 2:30 PM

Designing, building, and problem solving comes naturally to preschoolers, but calling it “engineering” often overwhelms the adults in their lives. Early childhood educators from Academy of Natural Sciences, Discovery Center Museum, Explora, and Sciencenter explore easy, bilingual hands-on activities that help adults stand back and empower children to take charge.

Presenters: **Annie Gordon**, *Education Program Coordinator, Sciencenter*; **Brandon Barney**, *Explora*; **Jessica Williamson**, *Early Childhood Specialist, Berkshire Museum*; **Mariah Romaninsky**, *Director of Education, Learning, and Development, The Academy of Natural Sciences of Drexel University*

Tags: [EARLY CHILDHOOD](#) [OUTREACH](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Making Matches to Collaborate on Youth Program Alum Long-Term Impact Studies

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 1:45 PM - 3:15 PM

In a rapidly changing environment, youth programs need a solid base of research and evaluation studies to support evidence-based decision-making. Explore strategies from a current long-term alum follow-up study and get matched with youth program leaders, informal learning researchers, and evaluators to explore your own future collaborations. Let's get matched!

Presenters: **Carey Tisdal**, *Director*, **Kristen Denton**, *Manager of Community and Exhibit Programs, California Science Center*, **Laura Herszenhorn**, *Director of Expanded Learning and Youth Engagement, California Academy of Sciences*, **Linda Aaron**, *Youth Development Programs Coordinator*, **Priya Mohabir**, *Senior Vice President Youth Development & Museum Culture, New York Hall of Science*

Tags: [DIVERSITY AND EQUITY](#) [YOUTH DEVELOPMENT](#)

Measuring Social Impact for Strategic Change

OPERATIONS, MARKETING, AND BUSINESS DEVELOPMENT

Wednesday, 1:45 PM - 3:15 PM

The Measurement of Museum Social Impact (MOMSI) study is creating a survey to help museums measure their social impact. Come explore social impact data, share your museum's needs to help shape a forthcoming toolkit, and hear the host museum perspectives on recruiting participants, the study, and using social impact data.

Presenters: **Kari Ross Nelson**; **Michelle Mileham**, *Project Manager, Utah Division of Arts & Museums*; **Pameladell Hillestad**, *Vice President of Play & Learning, Glazer Children's Museum*; **Ryan Auster**, *Manager, COVES & Learning Metrics, Museum of Science and The Collaboration for Ongoing Visitor Experience Studies (COVES)*

Tags: [COMMUNITY IMPACT](#) [SCIENTIFIC RESEARCH](#)

On Board and on Mission: Focus on Culture for Recruiting and Retaining Great Staff

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Wednesday, 1:45 PM - 3:15 PM

Does your organization's onboarding process put values and culture first? Attracting and building a quality team requires more than hiring skilled individuals, it involves meaningful, collaborative connections to culture and mission. This participatory session helps you create a flexible (often free) onboarding program that attracts, engages and retains staff.

Presenters: **Chris Thatcher**; **Clint Stone**, *Vice President for Programs, Science Museum Oklahoma*; **Jasmin Gainey**, *Human Resources Director, Science Museum Oklahoma*

Tags: [HUMAN RESOURCES/STAFFING](#) [INCLUSIVE WORKFORCE DEVELOPMENT](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Productive Tension: Advancing Research That Advances Institutions

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 1:45 PM - 3:15 PM

Research in informal environments generates important findings but can create (un)productive tension. This session will use case examples to highlight the productive tensions of integrating research with program and exhibit planning. Through discussion, participants will apply the case situations and solutions to opportunities for conducting research in their institutions.

Presenters: **Anjylla Foster**, *Researcher and Project Manager, Museum of Science and Industry*; **James Liu**, *Research Associate, New York Hall of Science*; **Joyce Ma**, *Principal Researcher, Visitor Research & Evaluation, Exploratorium*; **Katie Culp**, *Chief Learning Officer, New York Hall of Science*; **Kim Koin**, *Director of Art and Tinkering Studios, Chicago Children's Museum*; **Meredyth Sullivan**, *Senior Program Manager of LabVenture, Gulf of Maine Research Institute*

Tags: [LEARNING RESEARCH](#) [PROGRAM EVALUATION](#)

Project Pragmatists: Navigating the New Normal

LEADERSHIP

Wednesday, 1:45 PM - 3:15 PM

Most of us are now comfortable building the plane while flying it. But what if we could learn how to design the plane while flying it too? Sounds crazy? Well, join four "project pragmatists" who will take you supersonic through project management and help you fly over today's project challenges.

Presenters: **Andrea Harp**, *Chief of Staff / Director of Culture and Community, Michigan Science Center*; **Christian Greer**, *President and CEO, Michigan Science Center*; **Donna DiBartolomeo**, *Senior Director of Exhibits, California Academy of Sciences*; **Kim Amey**, *Deputy Director, Carnegie Science Center*

Tags: [DESIGN THINKING](#) [PROJECT MANAGEMENT](#)

What More Can We Find? How Sustaining Inquiry Impacts Museum Teams, Audiences, and Inclusivity

LEADERSHIP

Wednesday, 1:45 PM - 3:15 PM

In this experiential workshop, you will practice slowing down while collaboratively working together to look at and think through a discussion on the methodology of Visual Thinking Strategies (VTS). Learn how suspending judgment, paraphrasing, and staying in inquiry can positively impact museum workflow, design processes, educational programs, and self-awareness.

Presenters: **Dabney Hailey**; **Kerri Ziemann**, *Program Director, The Wild Center*; **Shannon Earnest**, *Gallery Manager, Saint Louis Science Center*

Tags: [21ST CENTURY SKILLS](#) [PROTOTYPING AND PILOTING](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Why Artists Matter in Science Museums

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Wednesday, 1:45 PM - 3:15 PM

What happens if an artist creates a science exhibit? In this session, learn how putting art at the center of a science exhibit can lead you to think differently about how science can be experienced and taught, leading to more diverse and sustainable museum experiences that have broader appeal and impact.

Presenters: **Anne Fullenkamp**, *Senior Director of Creative Experiences, Children's Museum of Pittsburgh*; **Anouk Wipprecht**; **Julie Eizenberg**, *Founding Principal, Koning Eizenberg Architecture*; **Marti Louw**, *Director, Learning Media Design Center*; **Sam Moore**, *Executive Director, Moonshot Museum*

Tags: EXHIBIT DESIGN REBUILDING AND REIMAGINING

Lightning Session: DEAI & Organization Change

Wednesday, 1:45 PM - 2:30 PM

Bridging the Gap: Fortifying DEI Educational Theories by Engaging Science Museum Professionals

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

In a giant game of "match-up", ASTC members explore educational frameworks from formal K-12 research and connect those frameworks to informal science practices. This session moves toward the development of an educational model that is applicable to informal science settings to help transform those spaces into more inclusive learning environments.

Presenters: **Mwenda O Kudumu**, *Doctoral Student, North Carolina State University*; **Lynn Chesnut**, *Doctoral Student, North Carolina State University*

Tags: DIVERSITY AND EQUITY LEARNING RESEARCH

Empowering STEM-Based Inventive Identity Among Young Women, Black Youth, and People With Disabilities at Museums

STEM LEARNING, EDUCATION, AND PROGRAMS

Through the lens of research and evaluation underway for the Smithsonian Lemelson Center's "Game Changers" project—prioritizing girls and Black youth ages 10-17, and people with disabilities—we will discuss how defining, fostering, and evaluating STEM-based inventive identity among diverse audiences could positively impact the wider informal science and education fields.

Presenters: **Monica M. Smith**, *Associate Director, Smithsonian's Lemelson Center for the Study of Invention & Innovation, National Museum of American History*; **Amanda Krantz**, *Senior Research Associate, Kera Collective*

Tags: 21ST CENTURY SKILLS

LIGHTNING SESSION: DEAI & ORGANIZATIONAL CHANGE



what's next?

ASTC 2022
ANNUAL CONFERENCE

3:30 pm

Feeding Hungry Minds and Fulfilling Human Services: Inspiring Underserved Youth in STEM Throughout the U.S.

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 3:30 PM - 4:15 PM

What do Miss America 2020 and science centers have in common? A commitment to inspire in STEM, showcasing how science is everywhere and for everyone. This session will highlight a powerful case study of the groundbreaking "Her Royal Scientist" Learning Lunchbox STEM kit and you can join this effort.

Presenters: **Camille Schrier**, **Gloria Iannucci**, **Stephen White**, *Chief Strategy Officer, COSI*

Tags: [COMMUNITY IMPACT](#) [OUTREACH](#)

Getting Started and Keeping Going: DEAAIJ Working Groups Within Museums

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Wednesday, 3:30 PM - 4:15 PM

Diversity, equity, access, anti-racism, inclusion, and justice (DEAAIJ) are all words that have become important in our vocabulary. In this session, three unique organizations come together to share about how they have begun institution wide DEAAIJ initiative work via staff-led working groups and convene discussions on this critically important work.

Presenters: **Brindhya Muniappan**, *Senior Director of the Museum Experience, Discovery Museum*; **Justin Williams**, *Director of Team & Community Engagement, Carnegie Science Center*; **Teresa Black**, *Ontario Science Centre*

Tags: [DIVERSITY AND EQUITY](#) [RACIAL JUSTICE](#)

Leadership Lab: Road to Recovery Edition

LEADERSHIP

Wednesday, 3:30 PM - 5:00 PM

After two years of COVID and persistent uncertainty, mid-level and senior leaders may feel tired, discouraged, and lonely. Take fresh inspiration from peers with empathetic ears, candid perspectives, and gently challenging approaches. Bring your own insights and conundrums as we work through what it means to lead toward hopeful recovery.

Presenters: **Christian Greer**, *President and CEO, Michigan Science Center*; **Holly Truitt**, *spectrUM Discovery Area*; **Joe Imholte**, *Executive Vice President, The Bakken Museum*; **Whitney Owens**, *Chief Learning Officer, Cincinnati Museum Center*

Tags: [REBUILDING AND REIMAGINING](#) [WOMEN IN LEADERSHIP](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Race and Unity: Let's Create a Roadmap for Inclusive Programs and Exhibitions

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Wednesday, 3:30 PM - 4:15 PM

The DoSeum and The Witte explore topics of race, racism, and unity through programs and exhibitions. These topics have been challenged in our state's formal education system. In this session, we will share our experiences in group discussions on partnerships, education, and guest experience and collectively develop a draft roadmap.

Presenters: **Beth Stricker**, *Vice President of Exhibitions, Witte Museum*; **Chris Navarro**, *Public Program & Community Partnership Manager, The DoSeum*; **Meredith Doby**, *Vice President of Exhibits, The DoSeum*; **Richard Kissel**, *Chief Program Officer, The DoSeum*; **Ronald Davis**, *Co-Curator, Witte Museum*

Tags: [COMMUNITY IMPACT](#) [RACIAL JUSTICE](#)

ScienceNearMe.org: A New Infrastructure to Connect Audiences Across Silos of Informal STEM Engagement and Learning

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 3:30 PM - 5:00 PM

Looking for ways to deepen STEM engagement for your community, and reach a broader audience in your museum? Learn about ScienceNearMe.org, a new innovative National Science Foundation funded resource that allows people to search STEM opportunities across the U.S. including science centers, science festivals, out-of-school time programs, and citizen scientists.

Presenters: **Ben Wiehe**, *Manager, MIT Museum*; **Darlene Cavalier**, *Director, SciStarter*; **Kate Dickerson**, *Interim Executive Director, Maine Discovery Museum*; **Martin Storksdieck**, *Director, STEM Research Center, Oregon State University Center for Research on Lifelong STEM Learning*; **Steven Snyder**, *President & CEO, Fleet Science Center*

Tags: [ADULT ENGAGEMENT](#) [COMMUNICATIONS](#)

Seizing Opportune Moments: Stories From Museums Taking On Big Change in a Changing World

LEADERSHIP

Wednesday, 3:30 PM - 4:15 PM

As the world redefined itself amidst a pandemic, three museums took on transformative changes. Chabot Space and Science Center remained closed to build a partnership with NASA. The Museum of Science and History accelerated a literal name-changing strategic plan. The Discovery Center became a school. Come and hear their stories.

Presenters: **Adam Tobin**, *Executive Director, Chabot Space & Science Center*; **Cara Dodge**, *NASA Headquarters*; **Kevin Thompson**, *Executive Director, Museum of Science & History*; **Rob Blevins**, *Executive Director, Discovery Center of Springfield*

Tags: [REBUILDING AND REIMAGINING](#) [RE-OPENING](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Simple Interactions: The Power of Positive Relational Practices Within Museums

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 3:30 PM - 5:00 PM

Human interactions are the building blocks of healthy development for children, youth, and families. Understanding and enriching these interactions can have long-lasting impacts for visitors and professionals. This session will explore interactions in science centers and affirming the critical role that people in these spaces have on their visitors and colleagues.

Presenters: **Annie White**; **Deborah Coppola**, *Professional Development Specialist, Children's Museum of Pittsburgh*; **Tom Akiva**, *EdD Program Director, University of Pittsburgh*

Tags: [ADULT ENGAGEMENT](#) [TEACHER PROFESSIONAL DEVELOPMENT](#)

The National STEM Gaming Network: Let's Talk About Purposeful Gaming

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 3:30 PM - 5:00 PM

Join the National STEM Gaming Network as we share our purposeful gaming initiatives designed to spark an interest in STEM education by using esports and video games as a platform to teach STEM-related skills. Purposeful gaming educational curricula can create 21st-century learning opportunities that are inclusive and accessible to all.

Presenters: **Alyson Smith**, *Senior Vice President of Engagement, Arizona Science Center*; **Chris Demko**, *Omnitheater & Immersive Media Manager, Science Museum of Minnesota*; **Cliff Zintgraff**, *Chief Learning Officer, The San Antonio Museum of Science and Technology*; **Mike Harris**, *Manager of Cyber Security Education, Saint Louis Science Center*; **Ted Black**, *President & CEO, Whitaker Center for Science and the Arts*

Tags: [FUTURE PLANNING](#) [SCIENCE EDUCATION](#)

Working Together Toward Better Co-creation

STEM LEARNING, EDUCATION, AND PROGRAMS

Wednesday, 3:30 PM - 4:15 PM

What happens when we invite the public to share authority in the design and execution of science education initiatives? What should our goals be for co-created projects? How do we measure success? We'll share takeaways from two projects and invite problem-solving on how organizations can approach their own co-creation work.

Presenters: **Claire Quimby**, *Senior Research Associate, Rockman et al Cooperative Inc*; **Elizabeth Kunz Kollman**, *Director, Research and Evaluation, Museum of Science, Boston*; **Leigh Ann Mesiti Caulfield**, *Senior Experience Researcher, Mad*Pow*

Tags: [COMMUNITY IMPACT](#) [PROJECT MANAGEMENT](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Lightning Session: Evaluation & Data Collection

Wednesday, 3:30 PM - 5:00 PM

LIGHTNING SESSION: EVALUATION & DATA COLLECTION

60-Minutes for Youth Development: Cultivating Relationships, Relevance, and Youth Voice in Informal Learning Experiences

STEM LEARNING, EDUCATION, AND PROGRAMS

School groups are back in many museums! For one museum, this means resuming a mixed-methods, experimental study of adolescent students attending learning lab field trip. With a focus on ethnic identity and youth development, this session will explore the potential impact of and good practices for informal learning experiences.

Presenters: **Anjylla Foster**, *Researcher and Project Manager, Museum of Science and Industry*, **Aaron Price**, *Director of Research and Evaluation, Museum of Science and Industry*

Tags: [YOUTH DEVELOPMENT](#) [IMPACT MEASUREMENT](#)

Curiosity WINS: Model to Manage and Inspire for Sustainability and Literacy

LEADERSHIP

From Curiosity to Literacy to Sustainability. The NSM's "Curiosity Spark Model" seamlessly links curiosity to science literacy through various museum activities and services. Coupled with partnerships and the "Sufficiency Economy Philosophy", this model will become a new lifelong learning process of Thai people.

Presenters: **Rawin Raviwongse**, *President, National Science Museum, Thailand*

Tags: [PARTNERSHIPS](#) [MANAGEMENT](#)

Evaluating Digital Engagement: What Should Transformative Museums Expect From Digitization and Online Approaches?

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

We present a rubric for the assessment of proposals of digital projects in museums created by the Transformative Museum initiative. This rubric is meant to be used at the proposal stage, but it has proven to be helpful in many different ways, such as preparing funding applications.

Presenters: **A Erik Stengler**, *Assistant Professor, Cooperstown Graduate Program*

Tags: [PROGRAM EVALUATION](#) [SUSTAINABILITY](#)

Measuring a Sense of Belonging at Museums and Cultural Institutions

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

We will present a model for thinking about how guests feel a sense of belonging (or not) at science museums along with an easy-to-use survey instrument and data analysis toolkit free for anyone to use.



what's next?

ASTC 2022
ANNUAL CONFERENCE

LIGHTNING SESSION: EVALUATION & DATA COLLECTION

Presenters: Aaron Price, *Director of Research and Evaluation, Museum of Science and Industry*

Tags: DIVERSITY AND EQUITY MEASUREMENT

Responding Obstacles That Impacts on Strategy of Enhancing Museum Management in a Mid-Size Science Museum

OPERATIONS, MARKETING, AND BUSINESS DEVELOPMENT

The COVID-19 pandemic has long lasting implications for all organizations. National Science Museum, Thailand strives not only to respond to short-term crises, but also to build flexibility to protect against future disruptions. This presentation outlines how we develop a robust framework for risk management while maintaining our long-term vision.

Presenters: **Suwarong Wongsiri**, *Vice President, National Science Museum, Thailand*

Tags: MANAGEMENT ADMINISTRATION

Using Out-of-the-Box Evaluation Methods to Capture Evidence of Broader Program Impacts

STEM LEARNING, EDUCATION, AND PROGRAMS

Everyone is tired of surveys. This talk will share two examples of alternative, participatory approaches to evaluation – Ripple Effect Mapping and an adaptation of Visual Thinking Strategies – and how they helped us more authentically capture evidence of community-level impacts in a multi-disciplinary, four-year community resilience education project.

Presenters: **Jessica Sickler**, *Principal, J. Sickler Consulting*

Tags: CLIMATE CHANGE



what's next?

ASTC 2022
ANNUAL CONFERENCE

5:00 pm

Rooftop Reunion

Wednesday, 5:00 PM – 6:30 PM



Join us for a special event on the rooftop of the David L. Lawrence Convention Center. Enjoy sweeping views of Pittsburgh and the Allegheny River, have a drink, and connect informally with other conference participants.

This event, for all conference participants, will include several themed “neighborhoods” to help you to find your community on the roof.

Each conference participant will receive one drink ticket. Additional drinks may be purchased using the convention center’s cash-less experience.

Levy

Sponsored in part by Levy.



what's next?

ASTC 2022
ANNUAL CONFERENCE

THURSDAY, SEPTEMBER 15, 2022

9:00 am

Museum Experience Day at Carnegie Science Center and Children's Museum of Pittsburgh

Thursday, 9:00 AM - 1:00 PM

BUSES WILL LOOP FROM THE OFFICIAL ASTC ANNUAL CONFERENCE HOTELS TO THE TWO HOSTS



Sci-Yinz in the 412

Explore the most visited museum in Western Pennsylvania before you head home! Enjoy special behind the scenes access to featured Carnegie Science Center experiences such as the Miniature Railroad & Village®, Buhl Planetarium, and the living collection. Try your hand at making in the BNY Mellon Fab Lab or solve a mystery as you try to *Escape USS Requin*. Experience live science in one of our three demonstration theaters, take in a planetarium show, marvel at a movie on a Certified Giant Screen, and more!

For all ages. Complimentary admission for ASTC Annual Conference participants with badge. ASTC participants who show their badge will receive 20% off in Carnegie Science Center's Riverview Café during the entirety of the conference.

Sci-Yinz in the 412 (Museum Day) programs will be offered from 9 AM – 1 PM.



Don't miss a chance to visit the host organization, Children's Museum of Pittsburgh, while in Pittsburgh!

Join us in MAKESHOP to do some weaving with unconventional materials, try to stay dry in Waterplay and don't miss the Garage, featuring an interactive art piece projected on the vaulted dome of the former Buhl Planetarium. Check out Measurement Rules, our latest traveling exhibit, and explore the lessons of Mister Rogers and Daniel Tiger messages in the Kindness Gallery.

In MuseumLab, explore the fashion exhibit, How You Wear It, as well as hands-on activities in Make Lab and Tech Lab including a collaborative metal collage. Then have a one-of-a-kind immersive experience in Gymlacium, a hand-woven laced rope sculpture built around the former Carnegie Library steel bookshelves, and meet the artist who built it, Manca Ahlin.

All programs at the Children's Museum end by 4:00 pm and are all ages. Show your badge at the café for a free entrée and beverage thanks to Bean Sprouts! Save 20% in the museum store.



what's next?

ASTC 2022
ANNUAL CONFERENCE

Poster Palooza

Join us for Poster Palooza in the Exhibit Hall on Tuesday, September 13, 2022, from 2:00 PM to 3:15 PM.

POSTER

A Rising Tide Lifts All Boats: A Post-pandemic Education Framework Powered by Partnerships

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

Traversing tomorrow together requires bold ways to connect with each other, other museums, cultural institutions, and public/private partners. As we consider how COVID-19 has impacted informal learning, we must act as community anchors. This poster will showcase a new formula for how you can engage in a community-centric manner.

Presenters: **Andy Aichele**, *Senior Director of Education Engagement, Organizational Learning & Development, COSI*; **Jessimi Jones**, *Executive Director, Springfield Museum of Art*; **Johnna Mcentee**, *Executive Director, Ohio History Connection*; **Kat O'Malley**, *Education Specialist, Ohio History Connection*; **Stephen White**, *Chief Strategy Officer, COSI*

Tags: [PARTNERSHIPS](#) [SCIENCE EDUCATION](#)

POSTER

A Systematic Review and Case Study for Multidisciplinary Projects Between the Arts and Sciences

EXTERNAL GROUPS AND COLLABORATORS

Tuesday, 2:00 PM - 3:15 PM

Our collaboration engaged young scholars in multidisciplinary pedagogy on matters of scientific truth, the construction of race, and current manifestations of institutional racism in STEM. Through the lenses of art, art history, the history of science, and science communication, this project explores the nested nature of race and scientific knowledge.

Presenters: **Janet Mariadoss**, *Neuroscience Student, Vanderbilt University*; **Kendra Oliver**, *Assistant Professor, Vanderbilt University*

Tags: [PROJECT MANAGEMENT](#) [RACIAL JUSTICE](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

Assessment Interactive Multimedia Exhibition to Learning Food and Drug Safety: A Practical Experiment

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

The program uses interactive multimedia (animation and images) to learn and raise the level of knowledge among children on the main causes of food poisoning, as well as the safety of dealing with medication. This study was conducted through an awareness exhibit in Saudi Arabia.

Presenters: **Ali Alwabel**, *Director of Corporate Communication, Interactive Awareness Center*,
Meshal Alajmi

Tags: [CREATING A BETTER FUTURE](#) [TEEN PROGRAMS](#)

POSTER

Beyond Museum Walls Prototyping: Strategies for Virtual Testing of a Digital Game Online

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

The New York Hall of Science will share insights into how museums can virtually develop and test outreach programs using digital platforms to garner feedback from diverse audiences, specifically focusing on the formative work conducted on the digital game "The Pack."

Presenters: **Nicholas Hartmann**, *Research Assistant, New York Hall of Science*

Tags: [COVID-19](#) [SCIENCE EDUCATION](#)

POSTER

Beyond the Whiz-Bang: Embedding Evaluation Into Science Shows

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

The poster will illustrate how the storyline of planning what foods the NASA planning team will recommend for inclusion on the next shuttle. It will show the changes and the evaluation based on findings, conclusions, and recommendations for both shows and evaluation of shows will be offered.

Presenters: **Bradley Morris**, *Associate Professor*; **Jacob Cason**, *Food Scientist, Cincinnati Museum Center*; **Joseph Heimlich**, *Senior Director of Research, COSI*; **Kristen St Clair**, *Culinary Education Director, La Soupe Inc.*

Tags: [LEARNING RESEARCH](#) [SCIENCE SHOWS](#)



POSTER

Broadening Participation in ISE: Inclusion, Diversity, Equity, and Access in Science Centers

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Tuesday, 2:00 PM - 3:15 PM

The results of this survey study help fill the gap in what we know about efforts in informal science education to better understand the current state of IDEA (inclusion, diversity, equity, and access) practices in informal STEM learning environments with the goal of attracting more diverse participants.

Presenters: **Lynn Chesnut**, *Doctoral Student, North Carolina State University*

Tags: [DIVERSITY AND EQUITY](#) [RACIAL JUSTICE](#)

POSTER

Business Development: Saudi FDA Establishing Interactive Science Center With Entrepreneurship Center to Innovate, Develop and Implement Exhibitions

OPERATIONS, MARKETING, AND BUSINESS DEVELOPMENT

Tuesday, 2:00 PM - 3:15 PM

Reviewing our experience at Saudi Food and Drug Authority (FDA) to create an environment for developing interactive applications with the latest technologies. Our aims are to develop young ideas and turn them into promising projects in the interactive center, based on sensory interaction, visual interaction, edutainment, virtual reality, and augmented reality application.

Presenters: **Ali Alwabel**, *Director of Corporate Communication, Interactive Awareness Center*, **Meshal Alajmi**

Tags: [BUSINESS DEVELOPMENT](#) [COMMUNITY IMPACT](#)

POSTER

Collaborative Inquiry: Best Practices in Creating STEM Learning Partnerships

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

In this poster we will discuss best practices for effective program development between museum and library educators as well as STEM experts from the community. Qualitative and quantitative data will show how experts incorporated partner suggestions and researcher feedback during debriefs and present patterns in suggested changes.

Presenters: **Catherine Haden**, *Professor, Loyola University Chicago*, **Graciela Solis**, *Postdoctoral Research Fellow, Loyola University Chicago*, **Kim Koin**, *Director of Art and Tinkering Studios, Chicago Children's Museum*

Tags: [DIVERSITY AND EQUITY](#) [SCIENCE EDUCATION](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

Creating a STEM Program for Teens Using Engineering and Technology Artifacts From World War II

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

This poster will explore how educators from The National World War II Museum have used the museum's STEM Innovation Gallery and the World War II artifacts it contains to create an escape room experience focused on technology and engineering innovations from World War II and how it impacts our lives today.

Presenters: **Kelly Goodner**, *Student Program Specialist (STEM), The National WWII Museum*

Tags: [COLLECTIONS](#) [TEEN PROGRAMS](#)

POSTER

Creating Cross-Curricular Content Using Math in Social Studies

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

It is more important than ever before to find ways to get kids interested in math and science. By linking mathematics to different subject areas like history, we can create cross-curricular experiences to pique interest early on.

Presenters: **Taylor Olsen**, *Teacher Librarian, Harlowton Public Schools*

Tags: [K-12 SCHOOL COLLABORATION](#) [TEACHER PROFESSIONAL DEVELOPMENT](#)

POSTER

Developing a Combination of Immersive Technology for Planetarium Content in Informal Learning Context

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Tuesday, 2:00 PM - 3:15 PM

In this interactive session, I will discuss how informal learning and 3D technology integrated in the design and development process more effective. Participants will learn how to bring benefits to school or museum partnerships to promote education and digital technology.

Presenters: **Sathit Lapvutirat**, *Division Director of Strategy and Risk Management, National Science Museum, Thailand*

Tags: [ADVANCED TECHNOLOGY](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

Discovering Partnerships: Discovery Lab + Tulsa Public Schools STEM Center

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

The new Tulsa Discovery Lab has embedded the local public-school STEM Center inside the museum as part of its architecture and programming solution. This presentation will discuss the formation of this unique partnership, explore goals of each entity, and plans to make the long-term partnership successful.

Presenters: **Jim Boulware**, *Principal, KKT Architects, Inc.*; **Raymond Vandiver**, *Executive Director, Discovery Lab*

Tags: [MAKING THE CASE FOR SCIENCE CENTERS](#) [PARTNERSHIPS](#)

POSTER

Engaging Visitors With Biology Through Bio-Tinkering: Impacts on Learner Engagement, Interests, and Attitudes

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Tuesday, 2:00 PM - 3:15 PM

In this poster, participants will learn about findings from the Biotinkering Lab that support the perspective that there is value in applying making, tinkering, and design challenge learning approaches to biology. In addition, this poster will offer new opportunities for community institutions to engage the general public and broaden access to these fields.

Presenters: **Abbey Thompson**, *Director, The Tech Interactive*; **Anja Scholze**, *Program Director of Biology + Design, The Tech Interactive*; **Caitlin Nealon**, *Life Sciences Experience Developer, The Tech Interactive*; **James Wong**, *Content Specialist, The Tech Interactive*

Tags: [MAKING AND TINKERING](#) [PROGRAM EVALUATION](#)

POSTER

Engineering Together: ISE Professionals Collaborate to Champion Youth and Family Engineering Practices in ASEE Framework

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

Join colleagues who want to collaborate on long-term plans to synthesize and communicate key engineering learning findings from informal science and engineering education, particularly in ways that constructively add value to the American Society of Engineering Education's 2020 framework of guidelines for pre-college engineering.

Presenters: **Christine Cunningham**, *Vice President of Research, Museum of Science*; **Dorothy Bennett**, *Director of Creative Pedagogy, New York Hall of Science*; **Hoda Ehsan**, *Director of Engineering and Design, The Hill School*; **Marcie Benne**, *Engagement Research and Advancement Director, Oregon Museum of Science and Industry*

Tags: [21ST CENTURY SKILLS](#) [DESIGN THINKING](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

Examining Trends in Natural History Science Museums and Aligning With K-12 Teacher & Learner Needs

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

This poster presents recent trends in natural history science museums and K-12 teaching and learning, and a vision for how culturally responsive-sustaining education can be a strategy to improve student achievement and support teacher needs while aligning museum trends and goals related to science education and redressing colonial histories.

Presenters: **Colleen Popson**, *Educator, National Museum of Natural History*, **Margaret Benson**, *Distance Learning Manager, National Museum of Natural History*, **Nicole Webster**, *Manager of School and Youth Programs, National Museum of Natural History*

Tags: [CREATING A BETTER FUTURE](#) [FUTURE PLANNING](#)

POSTER

External Groups and Collaborators for Exhibitions

EXTERNAL GROUPS AND COLLABORATORS

Tuesday, 2:00 PM - 3:15 PM

After the pandemic, circumstances, capabilities, and priorities in the science center field are changing rapidly. With a refined vision of the future, exhibition planners and directors need to collaborate with diverse groups. The exhibitions in the 21st century will enhance the innovative role of science centers making the use of local human and physical infrastructure, reflecting the needs of citizens, taking the initiative in the community, fostering cooperation-based professional human resources, and communicating effectively with government agencies.

Presenters: **Jihye Lim**, *Assistant Director, National Science Museum of Korea*

Tags: [ADULT ENGAGEMENT](#) [CLIMATE CHANGE](#)

POSTER

Floor Facilitators and Their Role in Learning Conversations Among Visitors

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

In this poster, participants will learn about a new training created to address issues of equity and access. Participants will learn about specific techniques used to train facilitators and have access to study findings on the impact of the experience on both the facilitator and the visitor.

Presenters: **Karen Knutson**, *Associate Director, UPCLOSE, Children's Museum of Pittsburgh*, **Kevin Crowley**, *Professor of Learning Sciences and Policy, Director UPCLOSE, Children's Museum of Pittsburgh*, **Nick Martinez**, *Assistant Director of Youth Initiatives, American Museum of Natural History*, **Preeti Gupta**, *Senior Director of Children and Youth Programs, American Museum of Natural History*

Tags: [DIVERSITY AND EQUITY](#) [HUMAN RESOURCES/STAFFING](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

Green Strategies for Traveling Exhibitions

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Tuesday, 2:00 PM - 3:15 PM

Presenters: **Elizabeth Frerichs**, *Operations Manager, The Shipping Monster and The Storage Monster*, **Robert Aspinall**, *Founder/CEO, The Shipping Monster and The Storage Monster*

Tags: [CLIMATE CHANGE](#) [TEMPORARY AND TRAVELING EXHIBITS](#)

POSTER

How to Design Successful Hands-On STEAM Activities for At-Home Learners

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

Recently, museums have been driven to refine materials for at-home learners. Howtosmile.org gathered a consortium of NISE Network museums to document and share this knowledge through a new At-Home Activities Framework and curated collection. We will discuss the framework, provide exemplars, and ask attendees to reflect on their at-home programming.

Presenters: **Alberto Lopez**, *Youth Outreach Coordinator, Florida Museum of Natural History*, **Brad Peroney**, *Carnegie Science Center*, **Darrell Porcello**, *Director of National STEM Networks, Children's Creativity Museum and NISE Network*, **Marci Howdyshell**, *Senior Director of Scientific Content and Research, COSI*, **Victoria Mitchell**, *Director of Exhibits and Programs, Exploration Place, The Sedgwick County Science and Discovery Center*

Tags: [PUBLIC PROGRAMS](#) [SCIENCE EDUCATION](#)

POSTER

Levels of Engagement for Autistic Individuals at Zoos and Aquariums: From Sensory Tolerance to Inclusion

DEAI, HUMAN RESOURCES, AND ORGANIZATIONAL CULTURE

Tuesday, 2:00 PM - 3:15 PM

Across the Informal STEM Learning (ISL) field, there are different practices and approaches to access and inclusion for autistic individuals with varied definitions and applications. This poster will share a framework that outlines and defines levels of engagement in ISL ranging from sensory tolerance to full inclusion for autistic individuals.

Presenters: **Amy Rutherford**, *Director, Professional Development & Education*, **Blaire Donnelly-Mason**, *Program Manager, Vanderbilt University Medical Center*, **Kelly Riedinger**, *Senior Researcher, Oregon State University Center for Research on Lifelong STEM Learning*, **Lauren Weaver**, *Director of Community Engagement, Vanderbilt University Medical Center*, **Victoria Bonebrake**, *Freelance Research and Evaluation Assistant, Oregon State University Center for Research on Lifelong STEM Learning*

Tags: [AUDIENCES WITH SPECIAL NEEDS](#) [DIVERSITY AND EQUITY](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

Making Do: Community Makerspace Partnerships to Support STEM Programs

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

This poster highlights key elements of the steps the NASA Wallops Flight Facility Visitor Center team took to evaluate program offerings, reduce the use of single-use activity materials, and establish a partnership with the local makerspace. Audiences will be able to access the program evaluation rubric, best practices for establishing community makerspace partnerships, and digital files of products that can be used in their own institution.

Presenters: **Amy Barra**, *Visitor Center Director, NASA - Goddard Space Flight Center*

Tags: [IMPACT MEASUREMENT](#) [MAKING AND TINKERING](#)

POSTER

Making With a Mission: An Interdepartmental Collaboration Between a Museum Box Office and Fab Lab

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

In this poster, learn about how Carnegie Science Center Admissions Team and BNY Mellon Fab Lab Carnegie Science Center created a unique partnership by integrating makerspace technology into our Box Office. Explore how the partnership has benefited the overall visitor experience, expanded to other areas of museum operations, and furthered the mission of the institution.

Presenters: **Brad Peroney**, *Carnegie Science Center*, **Emily Tremain**, *Admissions Manager, Carnegie Science Center*, **James Kappas**, *Senior Representative, Admissions, Carnegie Science Center*, **Stephen Luciano**, *Fab Lab Technical and Education Manager, Carnegie Science Center*

Tags: [MAKING AND TINKERING](#) [VISITOR EXPERIENCE](#)

POSTER

Mission to Mars: The National Air and Space Museum's in Person & Virtual STEM Camp

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

Join the Smithsonian National Air and Space Museum on a Mission to Mars! See how the museum facilitated a hands-on STEM camp for students K-6 in both virtual and in-person settings. This poster presentation will demonstrate how the museum pivoted its practices to accommodate different school settings.

Presenters: **Julia Orr**, *Education Program Specialist, National Air and Space Museum*, **Laura Blanton**, *Holt Scholars Coordinator, National Air and Space Museum*, **Nichole Thomas**, *Aerospace Educator, National Air and Space Museum*

Tags: [COVID-19](#) [K-12 SCHOOL COLLABORATION](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

Museum Labs 2.0: Measuring the Impact of Public Participation in Scientific Research

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

Does Public Participation in Scientific Research (PPSR) really enhance engagement in science learning? Come find out! A museum social science exhibition sent (or didn't) visitors' gameplay data to social scientists. We'll show the results of a quasi-experimental study comparing people who contributed their data to science to those who didn't.

Presenters: **Joshua Gutwill**, *Director of Visitor Research, Exploratorium*, **Tom Rockwell**, *Creative Director of Global Collaborations, Exploratorium*

Tags: EXHIBIT DESIGN LEARNING RESEARCH

POSTER

Museum Networks Across the State

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

This poster will share the work of two networks: the Wisconsin Children's Museum Collaborative and the Arkansas Discovery Network. These networks connect museum educators within the state to share expertise, resources, and encouragement to strengthen everyone's practice.

Presenters: **Bill Pariso**, *Manager of Maker Programming, Betty Brinn Children's Museum*, **Brittney Kugler**, *Discovery Network Director, Museum of Discovery*, **Peter Wardrip**, *Assistant Professor of STEAM Education*, **Pody Gay**, *Chief Education Officer, Museum of Discovery*, **Tarah Connolly**, *Graduate Student, University of Wisconsin-Madison Science Constellation*

Tags: PARTNERSHIPS

POSTER

NASA Resources for You!

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

NASA drives advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth. Learn how science museums and centers can work collaboratively with NASA STEM Engagement and other organizations to engage your visitors and community.

Presenters: **Amelia Chapman**, *STEM Informal Education Specialist, Jet Propulsion Laboratory*, **Beverly Girtten**; **Leslie Lowes**, *Informal Education Specialist, Jet Propulsion Laboratory*

Tags: SCIENCE EDUCATION VIRTUAL ENGAGEMENT



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

NASA's Neurodiversity Network (N3): Co-designing NASA Resources With Neurodiverse Youth in Formal and Informal Spaces

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

NASA's Neurodiversity Network (N3) provides a pathway to NASA participation and STEM employment for neurodiverse learners, with a focus on those on the autism spectrum. This poster will show the participatory co-design process and share access to finalized NASA activities for use in schools and museum settings.

Presenters: **Ariana Riccio**, *Researcher, Education Development Center*, **Georgette Williams**, *Program Manager, Education Services, New York Hall of Science*, **Laura Peticolas**, *Principal Investigator, Heliophysics Forum*, **Lynn Cominsky**, *Director of EdEon STEM Learning, and Professor in the Department of Physics & Astronomy, EdEon*, **Wendy Martin**, *Research Scientist, Education Development Center*

Tags: [ACCESSIBILITY](#) [SCIENCE EDUCATION](#)

POSTER

Noticing and Supporting Families' Agency As STEM Learners in Science Center Environments

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

This poster presentation will provide opportunities for science center professionals to 1) learn about facets of agency that are relevant and visible in science center experiences; 2) discuss the intersection of agency and inclusion in their own work in informal STEM environments; and 3) suggest future directions for this work as the project evolves.

Presenters: **Dana Schloss**, *Associate Vice President of Exhibits, New York Hall of Science*, **Suzy Letourneau**, *Senior Research Associate, New York Hall of Science*

Tags: [DIVERSITY AND EQUITY](#) [LEARNING RESEARCH](#)

POSTER

Project PLANET: Working Together to Bridge Student Learning Between Formal and Informal Learning Environments

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

Explore the integration of literacy strategies, hands-on inquiry-based investigations, and planetarium experiences in an instructional sequence to support student learning of astronomy. This poster will present results from a two-year study of the implementation of two instructional sequences co-developed by teachers and planetarium educators, focusing on how they bridged learning from formal to informal learning environments.



what's next?

ASTC 2022
ANNUAL CONFERENCE

Presenters: **Alison Allen**, *Senior Research Associate/Research Manager, Rockman et al Cooperative Inc*; **Brian Kruse**, *Lead Formal Educator, Astronomical Society of the Pacific*; **Karen Schwarz**, *West Chester University*; **Kristin Bass**, *Director of Research Development, Rockman et al Cooperative Inc*; **Nicole Jarvis**, *Research Assistant, Rockman et al Cooperative Inc*

Tags: [EARLY CHILDHOOD](#) [PARTNERSHIPS](#)

POSTER

Race to Zero: Insights Gains Along the Science Museum of Minnesota's Path Toward Carbon Neutrality

[LEADERSHIP](#)

Tuesday, 2:00 PM - 3:15 PM

The Science Museum of Minnesota is committed to 100% carbon neutrality by 2030. This poster will highlight progress toward this goal, how it supports the museum's climate change statement and its directive that the institution conduct an annual review of its climate initiatives and make this information publicly available.

Presenters: **Patrick Hamilton**, *Director, Climate Change, Energy & the Environment, Science Museum of Minnesota*

Tags: [21ST CENTURY SKILLS](#) [ADMINISTRATION](#)

POSTER

Rebounding Through Making and Tinkering: Activities to Support the Emotional Needs of Children

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 2:00 PM - 3:15 PM

Making and tinkering activities that can be used to help children understand and cope with strong and traumatic weather events will be presented. The activities can be used in professional development settings for teachers to use in the classroom and on the museum floor.

Presenters: **Alexandra Pearson**, *Maker Manager, Knock Knock Children's Museum*

Tags: [EARLY CHILDHOOD](#) [MAKING AND TINKERING](#)

POSTER

Rubrics for Researching Depth of Implementation: Creating Tools Practitioners Can Use for Teen Science Cafés

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 2:00 PM - 3:15 PM

Teen Science Cafés are programs that result in informal STEM education events that bring together scientists with teens; designed for a teen audience and led by teens. This poster will share researchers' process and outcomes in the creation of this tool as well as have full copies available for attendees as a take-home resource.



what's next?

ASTC 2022
ANNUAL CONFERENCE

Presenters: **Jessica Sickler**, *Principal, J. Sickler Consulting*, **Michelle Hall**, *President and CEO, Institute for Science Education New Mexico*

Tags: [21ST CENTURY SKILLS](#)

POSTER

STEP Outside: Engaging Students and Teachers in Outdoor Learning

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 2:00 PM - 3:15 PM

STEP Outside was created to address teacher-identified barriers to outdoor learning and we co-created professional development and facilitated programs with teachers to develop a unique experience for schools. Our co-creation evaluation tool measures the pre- and post-program level of comfort the teachers have with outdoor learning, their learning objectives, and the outdoor space the school provides.

Presenters: **Stephany Hine**, *Social Justice Educator, Museum of Life and Science*, **Tomara Gee**, *Program Manager of Group and School Programs, Museum of Life and Science*

Tags: [K-12 SCHOOL COLLABORATION](#) [TEACHER PROFESSIONAL DEVELOPMENT](#)

POSTER

Striking a Playful Balance: Understanding How Exhibits Can Afford Playful STEM Engagement for Young Learners

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 2:00 PM - 3:15 PM

This poster session will share initial findings from Developing STEM Skills through Play and Exhibit Design for Early Learners in Children's Museums and Science Centers. The topics of play and STEM for young children within informal learning spaces will be discussed and the challenge of striking a balance of enough play and enough STEM to entice children to engage in STEM exhibits.

Presenters: **Jen Rehkamp**, *Director of Research, Association of Children's Museums*, **Kelly Hoke**, *Researcher, Oregon State University Center for Research on Lifelong STEM Learning*, **Kelly Riedinger**, *Senior Researcher, Oregon State University Center for Research on Lifelong STEM Learning*, **Martin Storksdieck**, *Director, STEM Research Center, Oregon State University Center for Research on Lifelong STEM Learning*

Tags: [EARLY CHILDHOOD](#) [SCIENCE EDUCATION](#)

POSTER

The Impact of Informal Museum Programs on STEM Career Awareness, Interest, and Engagement: A Meta-Synthesis

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 2:00 PM - 3:15 PM

The goal of this study was to perform a meta-synthesis of research on youth participants of informal STEM programs. In a review of over 500 informal science education studies, we found that



what's next?

ASTC 2022
ANNUAL CONFERENCE

long-term participation in informal STEM programs were effective strategies for attracting and retaining students in STEM trajectories. Our findings suggest that informal STEM programs play an important role in fostering equity and persistence in STEM trajectories.

Presenters: **Bobby Habig**, *American Museum of Natural History*

Tags: [TEEN PROGRAMS](#) [YOUTH DEVELOPMENT](#)

POSTER

The Long Game: Using Games to Transform Science Center Experiences

[STEM LEARNING, EDUCATION, AND PROGRAMS](#)

Tuesday, 2:00 PM - 3:15 PM

The Moon Adventure Game is an open-source collaborative game created to incorporate games into program offerings. This poster provides an opportunity to look at design thinking for museum experiences in the form of escape rooms and other role playing games that are more portable and versatile than traditional escape rooms.

Presenters: **Catherine McCarthy**, *Project Manager Senior - NISE Network, Arizona State University - Center for Innovation in Informal STEM Learning*, **Jeannie Colton**, *Project Coordinator, NISE Network*, **Max Cawley**, *Associate Program Manager - Learning Philosophy & Evaluation, Museum of Life and Science*

Tags: [DESIGN THINKING](#) [PROTOTYPING AND PILOTING](#)

POSTER

The Perceptions and Practices of Informal Science Educators Regarding Culturally Relevant Education in Science Centers

[EXHIBITS, EXPERIENCES, AND TECHNOLOGY](#)

Tuesday, 2:00 PM - 3:15 PM

This poster explores research about culturally relevant education (CRE) in science centers and informal contexts to offer the field recommended practices and ideas on how best to support people working in these positions. The poster describes the research design, data collection, project results, and recommendations for the field.

Presenters: **Mwenda Kudumu**, *Doctoral Student, North Carolina State University*

Tags: [DIVERSITY AND EQUITY](#) [SCIENCE EDUCATION](#)

POSTER

The Story of *Kapa*: Indigenous Cultural Practice Translated to Hands-On STEM Learning Experiences

Tuesday, 2:00 PM - 3:15 PM

An interactive exhibit that focuses on “indigenous knowledge” and directly displays the concepts of native Hawaiian science in the process of making *kapa* (Hawaiian bark cloth), to demonstrate



what's next?

ASTC 2022
ANNUAL CONFERENCE

that a Hawaiian Culture-Based framework can be utilized to design STEM exhibits that increase learner engagement and depth of knowledge of STEM concepts.

POSTER

To Be Entertained and Informed: The What, How and Why of Science Documentary Viewership

EXHIBITS, EXPERIENCES, AND TECHNOLOGY

Tuesday, 2:00 PM - 3:15 PM

What makes documentaries effective forms of science communication? Based on a survey of science documentary film viewers, find out what viewers expect and enjoy in film content and hosting, how they watch, and why they keep coming back to science documentary films!

Presenters: **Nicole Jarvis**, *Research Assistant, Rockman et al Cooperative Inc*

Tags: [ADULT ENGAGEMENT](#) [SCIENCE SHOWS](#)

POSTER

University Partnerships for Stability and Continuity in Times of Change

EXTERNAL GROUPS AND COLLABORATORS

Tuesday, 2:00 PM - 3:15 PM

As our museum has coped with leadership change, employee turnover, COVID, and other changes, our institutional liaison with the nearby research university has been critical to maintaining collaborations and contributing to institutional knowledge. This poster discusses the benefits and challenges of having a liaison in place during a time of change.

Presenters: **Mary Roberts-Baako**, *Executive Director, Science Museum of Western Virginia*; **Phyllis Newbill**, *University Liaison, Science Museum of Western Virginia*

Tags: [PARTNERSHIPS](#) [SMALL MUSEUMS](#)

POSTER

Visitor Data in the COVID Era: Looking Back to Move Forward

LEADERSHIP

Tuesday, 2:00 PM - 3:15 PM

This poster will provide information made possible through the Collaboration for Ongoing Visitor Experience Studies (COVES) project and community. It features two elements 1) data we learned about visitors and the visitor experience over the course of the pandemic, and 2) diverse perspectives about how this learning has changed different museums' goals and plans moving forward.

Presenters: **Alexander Lussenhop**, *Research Associate, Museum of Science and The Collaboration for Ongoing Visitor Experience Studies (COVES)*

Tags: [REBUILDING AND REIMAGINING](#) [VISITOR EXPERIENCE](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

POSTER

We Bee-long: Making Connections in Our Community

STEM LEARNING, EDUCATION, AND PROGRAMS

Tuesday, 2:00 PM - 3:15 PM

We Bee-Long is an outdoor exhibit space at Muse Knoxville, in Knoxville Tennessee. Through this inclusive space, we will engage visitors in learning about honeybee basics while helping to eliminate the culture of fear surrounding honeybees. This exhibit space had been designed through the lenses of belonging and sustainability.

Presenters: **Karla Pitcher**, *Programs Manager, Muse Knoxville*; **Lee Robinson**, *Director of Education and Exhibits, Muse Knoxville*

Tags: [SCIENCE EDUCATION](#) [SUSTAINABILITY](#)



what's next?

ASTC 2022
ANNUAL CONFERENCE

Sponsors

ASTC is grateful to these organizations for their support of the ASTC 2022 Annual Conference and wishes to thank them for their generous sponsorship:

PITTSBURGH PRESENTING SPONSORS



SAPPHIRE SPONSOR



DIAMOND SPONSOR





what's next?

ASTC 2022
ANNUAL CONFERENCE

PLATINUM SPONSORS



GOLD SPONSORS



SILVER SPONSORS





what's next?

ASTC 2022
ANNUAL CONFERENCE

JADE SPONSORS



BRONZE SPONSORS



SUPPORTER



LOCAL HOSTS





what's next?

ASTC 2022
ANNUAL CONFERENCE

Exhibitors

Please be sure to visit our exhibitors on Monday and Tuesday!

ACME Ticketing

www.acmeticketing.com

American Alliance of Museums

www.aam-us.org

American Association for the Advancement of Science

www.aaas.org

American Museum of Natural History

www.amnh.org

Axiom Space, Inc.

www.axiomspace.com

Birdly VR / D3D Cinema

www.birdlyvr.com

BODY WORLDS

www.bodyworlds.com

Brown Dog Gadgets

www.browndoggadgets.com

Budd Wentz Productions – Wentzscope Microscopes

www.wentzscope.com

BWC Visual Technology, Spherical Systems

www.bwcviz.com

CampDoc

www.campdoc.com

Canadian Association of Science Centres

www.canadiansciencecentres.ca

Carnegie Science Center's Mobile Fab Lab

www.carnegiesciencecenter.org

Chicago Scenic Studios

www.chicagoscenic.com

Children's Museum of Pittsburgh

www.pittsburghkids.org

Clark Planetarium

www.clarkplanetariumproductions.org

Cosm

www.cosm.com

Cosmic Picture

www.cosmicpicture.com

COVES

www.understandingvisitors.org

Digitalis Education Solutions

www.digitaliseducation.com



what's next?

ASTC 2022
ANNUAL CONFERENCE

DuPage Children's Museum

www.dupagechildrens.org/traveling-exhibits

Earthwalk / National Scenic Visitors Center

www.nsvc.us

Eriksen Translations Inc.

www.eriksen.com

Etix

www.hello.etix.com

Evergreen Exhibitions

www.evergreenexhibitions.com

Exhibits Development Group

www.exhibitsdevelopment.com

Field Museum

www.fieldmuseum.org

FLEXHIBIT

www.flexhibit.com

Flying Fish Exhibits

www.flyingfishexhibits.com

Foldscope Instruments, Inc.

www.foldscope.com

FUN EXHIBITS™

www.funexhibits.com

Hellenga Projects

www.hellenga.com

Hüttinger Interactive Exhibitions

www.huettinger.de

IF/THEN Initiative

www.ifthencollection.org

Imagine Exhibitions Inc.

www.imagineexhibitions.com

Interspectral

www.interspectral.com

KEVA Planks Museums Exhibits

www.KEVAplanks.com

Kotsanas Museum of Ancient Greek Technology

www.kotsanas.com

Kraemer Design & Production

www.kd-p.com

Kubik Maltbie

www.kubikmaltbie.com

Laser Fantasy

www.laserfantasy.com

Little Ray's Nature Centres

www.littleraysnaturecentres.com

Luci Creative

www.lucicreative.com

Mattheatre

www.mattheatre.com

MICRO LLC

www.micro.ooo

Minnesota Children's Museum

www.mcm.org/museum-professionals/traveling-exhibits-page

Minotaur Mazes

www.minotaurmazes.com

MizarLabs Design Consultancy Education

www.mizarlabs.com

Momentum Interactives

www.momentuminteractives.com

Museum of Discovery's The Discovery Network

www.museumofdiscovery.org



what's next?

ASTC 2022
ANNUAL CONFERENCE

Museum Store Association

www.museumstoreassociation.org

Museums for All

www.museums4all.org

NASA Goddard Space Flight Center

www.nasa.gov/goddard

NASA's Universe of Learning

www.universe-of-learning.org

National Oceanic and Atmospheric Administration

www.noaa.gov/education

Night Kitchen Interactive

www.whatscookin.com

NISE Network

www.nisenet.org

Northern Light Productions

www.nlprod.com

nWave Pictures Distribution

www.nwave.com

Omaha Children's Museum

www.ocm.org

Omniverse Media – Spacewalk VR

www.omniverse.ca

Ontario Science Centre

www.ontariosciencecentre.ca/isales

OpenSpace / The Elumenati

www.elumenati.com/news/openspace

Oregon Museum of Science and Industry

www.oms.edu/museum-services

Panelcraft

www.panelcraft.com

Promotions Guy

www.promotionsguy.com

Research Casting International

www.rescast.com

RGI Creative

www.rgicreative.com

Richard Lewis Media Group

www.rlmg.com

Rigamajig

www.rigamajig.com

Riggs Ward Design

www.riggsward.com

Ripley Entertainment

www.ripleys.com/traveling-shows

Roto

www.roto.com

Science Museum of Minnesota

www.smm.org

Science North International Sales

www.sciencenorth.ca/internationalsales

Science Planet

www.scienceplanet.com

Sciencenter

www.sciencenter.org/rentals

Silver Plume Exhibitions

www.spexhibitions.com

Sinking Ship Entertainment

www.sinkingship.ca

SITES

www.sites.si.edu



what's next?

ASTC 2022
ANNUAL CONFERENCE

SKOLNICK Architecture + Design Partnership

www.skolnick.com

Solar System Trails

www.solarsystemtrails.com

Squonk

www.squonk.org

Stage 9 Exhibits

www.stage9exhibits.com

Tactile Images

www.tactileimages.com

Tessitura Network

www.tessituranetwork.com

The Children's Museum of Indianapolis

www.childrensmuseum.org

TicketSpice

www.ticketspice.com

TinkRworks

www.tinkrworks.com

Trivium Interactive LLC

www.triviuminteractive.com

U.S. Federal Agency Opportunities

Veevart

www.veevart.com

Vsys One

www.vsyone.com



ASTC Board of Directors

EXECUTIVE COMMITTEE AND OFFICERS

William Harris

CHAIR

Space Center Houston
Houston, Texas, USA

Tim Ritchie

CHAIR-ELECT

Museum of Science
Boston, Massachusetts, USA

JoAnn Newman

SECRETARY

Orlando Science Center
Orlando, Florida, USA

Catherine Horne

TREASURER

Discovery Place
Charlotte, North Carolina,
USA

Larry Dubinski

IMMEDIATE PAST CHAIR

The Franklin Institute
Philadelphia, Pennsylvania,
USA

Tracy Calogheros

MEMBER AT LARGE

The Exploration Place
Prince George, British
Columbia, Canada

Andrés Roldán

MEMBER AT LARGE

Parque Explora
Medellín, Colombia

Erin Graham

INCOMING MEMBER AT LARGE

Oregon Museum of Science
and Industry
Portland, Oregon, USA

Christofer Nelson

PRESIDENT AND CEO

Association of Science and
Technology Centers
Washington, D.C., USA

DIRECTORS

Frederic Bertley

Center of Science and
Industry (COSI)
Columbus, Ohio, USA

Sam Dean

Scott Family Amazeum
Bentonville, Arkansas, USA

Rena Dorph

The Lawrence Hall of Science
Berkeley, California, USA

Robert Firmhofer

Copernicus Science Center
Warsaw, Poland

Christian Greer

Michigan Science Center
Detroit, Michigan, USA

Marilee Jennings

Children's Discovery
Museum of San Jose
San Jose, California, USA

Doug Jones

Florida Museum of Natural
History
Gainesville, Florida, USA

Tara MacDougall

Discovery Center at Murfree
Spring
Murfreesboro, Tennessee,
USA

María Emilia Beyer Ruiz

Universum, Museo de las
Ciencias de la UNAM
Mexico City, Mexico

Curt Simmons

Science Center of Iowa
Des Moines, Iowa, USA

Adalene "Nene" Spivy

Children's Science Center
and Northern Virginia
Science Center
Foundation
Fairfax, Virginia, USA

INCOMING DIRECTORS

Lori Bettison-Varga

Natural History Museums of
Los Angeles County
Los Angeles, California, USA

Sara Schapiro

Federation of American
Scientists
Washington, D.C., USA



what's next?

ASTC 2022
ANNUAL CONFERENCE

Conference Program Planning Committee

Christian Greer

COMMITTEE CO-CHAIR

Michigan Science Center
Detroit, Michigan, USA

Heather Norton

COMMITTEE CO-CHAIR

Discovery Place
*Charlotte, North Carolina,
USA*

Daniel Bateman

Exploration Place
Wichita, Kansas, USA

Hermilio (Emilio) Bautista

New York Hall of Science
Corona, New York, USA

Mary Jane Conboy

Ontario Science Centre
Toronto, Ontario, Canada

Sari Custer

Arizona Science Center
Phoenix, Arizona, USA

Ashanti Davis

Fleet Science Center
San Diego, California, USA

Ben Dickow

Columbia Memorial Space
Center
Downey, California, USA

Robert Firmhofer

Copernicus Science Centre
Warsaw, Poland

Joe Imholte

The Bakken Museum
Minneapolis, Minnesota, USA

Jennifer Jovanovic

GrowingGreat
*Manhattan Beach, California,
USA*

Andrea Kiel

Ontario Science Centre
Toronto, Ontario, Canada

Chip Lindsey

Discovery Lab
Tulsa, Oklahoma, USA

Rachel Mastromarino

Children's Museum of
Pittsburgh
*Pittsburgh, Pennsylvania,
USA*

Dale McCreedy

Discovery Center at Murfree
Spring
*Murfreesboro, Tennessee,
USA*

Mimi Meredith

Cosmosphere
Hutchinson, Kansas, USA

Tony Millet

Natural History Museum of
Utah
Salt Lake City, Utah, USA

Norberto Oropez

California Science Center
Los Angeles, California, USA

Barbara Punt

Punt Consulting Group
*Redondo Beach, California,
USA*

Joseph Quiñones

Phillip and Patricia Frost
Museum of Science
Miami, Florida, USA

Melissa Reynolds

Carnegie Science Center
*Pittsburgh, Pennsylvania,
USA*

Timothy Rhue II

Space Telescope Science
Institute (STScI)
Baltimore, Maryland, USA

Kalie Sacco

The Lawrence Hall of Science
Berkeley, California, USA

Allison Schwanebeck

Science Center of Iowa
Des Moines, Iowa, USA

Karen Wise

Wise Strategic Advising
*Santa Monica, California,
USA*



what's next?

ASTC 2022
ANNUAL CONFERENCE

ASTC Staff

Melissa Ballard

Director of Programs
mballard@astc.org

Laura Bartock

Community Science Fellow
lbartock@astc.org

Jamie Bell

CAISE Project Director
jbelle@informal-science.org

Julian Boaitay

Director of Finance and
Administration
jboaitay@astc.org

Frances Burg

Chief of Staff
fburg@astc.org

Cassie Byrd

IF/THEN® Gender Equity Project
Manager
cbyrd@astc.org

Jamie Durana

Manager of Communications
and Special Projects
jdurana@astc.org

Adam Fagen

Director of Communications,
Advocacy, and Engagement
afagen@astc.org

Amanda Fisher

Senior Manager of Programs
afisher@astc.org

Lauren Griffin

Manager of Inclusion Initiatives
lgriffin@astc.org

Wendy Hancock

Senior Manager of Engagement
whancock@astc.org

Rose Hendricks

Climate Change and Public
Engagement Consultant
rhendricks@astc.org

Nina Humes

Manager of ASTC Annual
Conference
nhumes@astc.org

Diane Hurley

Associate Director of
Community and Conference
dhurley@astc.org

Erica Kimmerling

Senior Advisor for Science
Engagement Policy and
Partnerships
ekimmerling@astc.org

Eve Klein

LISTEN Network Weaver
eklein@astc.org

Melissa Kocelko

Coordinator of Member
Communications and
Engagement
mkocelko@astc.org

Christopher Nelson

President and CEO
cnelson@astc.org

Cheri Nichol

Health & Wellness Coordinator
cheri.nichol@conferencedirect.com

Joaquin Peña

Staff Accountant
jpena@astc.org

Aya Rothwell

CAISE Communications
Coordinator
arothwell@informal-science.org

Shannon Sullivan

CAISE Project Manager
ssullivan@informal-science.org

Erin Thelen

Manager of Allied Member
Engagement
ethelen@astc.org

Christine Trillana

Coordinator of Operations and
Special Projects
ctrillana@astc.org

Naomi Wallace

Manager of Impact Initiatives
nwallace@astc.org

Gaby Wilson

Manager of Member Data,
Services, and Engagement
gwilson@astc.org





The Association of Science and Technology Centers (ASTC) is a professional membership organization with a vision of increasing understanding of and engagement with science and technology among all people, and a mission to champion and support science and technology centers and museums and the entire science engagement field.

Founded in 1973, ASTC champions and supports more than 500 science centers, technology museums, natural history museums, children's museums, and other STEM-rich, place-based institutions, such as nature centers, aquariums, planetariums, zoos, and botanical gardens throughout North America and in nearly 50 countries—as well as nearly 200 other organizations that share an interest in science learning and engagement. In an average year, ASTC-member science centers and museums engage more than 110 million people around the world annually.

ASTC is a 501(c)(3) tax-exempt nonprofit educational organization.

Association of Science and Technology Centers
818 Connecticut Avenue, NW
Seventh Floor
Washington, DC 20006
United States of America

202-783-7200
info@astc.org

www.astc.org