

Designing Impactful Programs for Girls & Women in STEM

February 19, 2025

IF/THEN[®]

CHAMPIONS NETWORK



Welcome!

Share in the chat: Have you ever developed or led a STEM program/event for girls and women?
If so, tell us more!



Agenda

- Introductions
- Network Welcome & Goals
- Network Structure & Activities
- Strategies for Developing STEM Programs and Events for Girls/Women
- Network Members Share & Questions
- Upcoming Network Opportunities

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Emily Early
Senior Program Manager



Brenda Britsch
Director of Research and
Evaluation



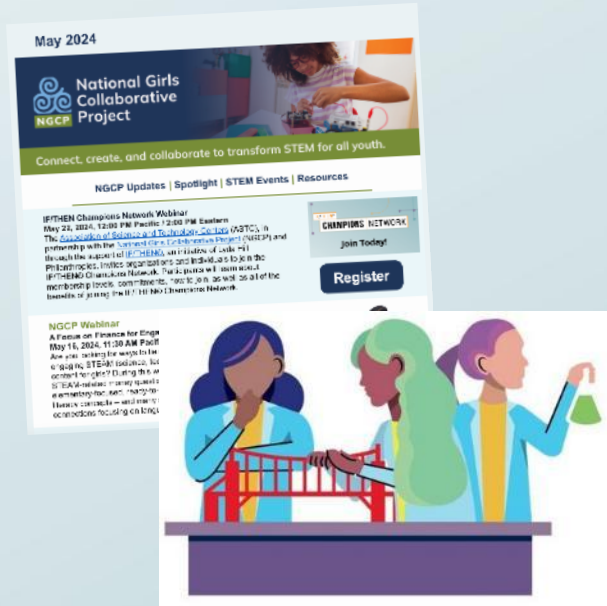
Tara Cox
Senior Manager, Programs &
Partnerships

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



NGCP Resources:

- National Webinars
- Monthly Newsletter
- Website featuring research and statistics related to girls and women in STEM
- Partner Projects





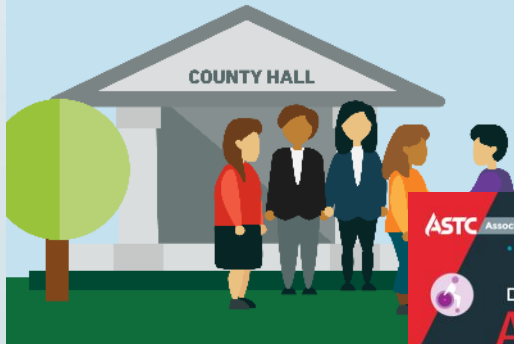
Amanda Fisher
Assistant Director of Programs



ASTC **creates strategic opportunities, develops intellectual capital, and assembles resources** to support our members in realizing their missions and engaging their communities.

CIVIC ENGAGEMENT AND POLICY MAKING

- Funding opportunities
- Annual conference and convenings
- Professional learning & development



The background is a solid teal color. It features several abstract, light-colored lines (in shades of blue and green) that form various geometric shapes and paths. These lines are punctuated by small, solid-colored dots (blue and green) at various points, creating a network-like or circuit-like aesthetic. The lines and dots are scattered across the frame, with some forming more complex shapes like loops and curves, while others are simple straight lines with dots at their ends.

IF/THEN® Champions Network

Goals

Join a growing movement of institutions and individuals **committed to advancing gender equity within STEM fields** via the IF/THEN® Collection.

The network goals are to **activate and grow a network** of museums and individual members that will champion gender equity work, support the overall goals of the IF/THEN® initiative, provide mutual support, and act as institutional resources for others.



The **IF/THEN® Collection** is the largest free resource of its kind dedicated to increasing access to authentic and relatable images of real women in STEM.

The Collection is part of the [IF/THEN®](#) Initiative, a national effort sponsored by [Lyda Hill Philanthropies®](#) to inspire young girls to pursue STEM careers while creating a culture shift in how the world perceives women in STEM.



Membership Levels

Individual



For **educators, exhibit developers, and others** who support the IF/THEN® initiative but may not be housed within an organization or who have not yet obtained an organizational commitment.

Individual members do not need to belong to an ASTC member organization or be in the United States to join.

Organizational



For **ASTC member organizations** in the US, including museums, science centers, and allied members.

Organizational members are required to complete the organizational commitment form. This is a high-level commitment that acknowledges the specific requirements that accompany organizational membership.

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Member Activities

Quarterly Webinars

- February, May, July, and October 2025
- Will also be hosting a few virtual member meetups!
- PD, guest speakers

Suite of Resources

- IF/THEN® Collection, Project Library, Gender Equity Toolkit
- Media Toolkit
- LinkedIn Group

ASTC Annual Conference

- September 6-9, 2025, in San Francisco, CA
- Hosting a session, event, and booth (exact activities TBD)

Email Communications

- Network updates
- IF/THEN® Collection highlights and updates
- Engagement opportunities

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Additional Activities for Organizational Members

Organizational Planning Sessions

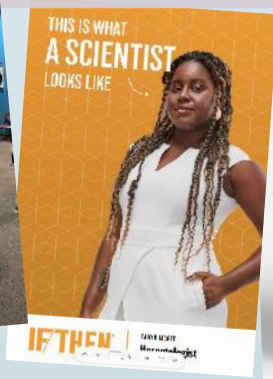
- Examine organizational strengths and goals for advancing gender equity

Welcome Kit

- IF/THEN®-branded materials to display at your organization

Funding Opportunities

- ASTC conference funding in 2025, exhibit content, and IF/THEN® exhibit and program grants



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The background is a solid teal color. It is decorated with several abstract geometric patterns. These include thin lines in shades of blue and green, some of which are curved or form partial circles. Small solid dots in the same color palette are placed at various points along these lines, often at the ends or at intersections. The overall aesthetic is clean, modern, and technical, consistent with the STEM theme of the text.

Designing Impactful Programs for Girls & Women in STEM

Program Planning and Outreach

- **Purposeful recruitment and outreach to girls**
 - Connect with local girl-serving organizations
 - Consider other factors: race, ethnicity, socio-economic status, ability, geography
- **Make programming accessible and welcoming**
 - Incorporate appealing images and program names in outreach materials
 - Show the diversity of STEM people and careers
 - Provide low or no cost programming



Program Design and Implementation

- **Encourage educators to reflect on their own beliefs, mindsets, and messaging**
 - Talk about STEM stereotypes related to people and careers
- **Make connections between girls' cultural and social backgrounds and STEM**
 - Foster girl-centered group discussions to learn about girls' identities, interests, experiences, and prior STEM knowledge
 - Integrate hands-on activities connected to girls' lives and interests
- **Integrate diverse role models and prepare role models**
 - STEM professionals of various career stages and fields, near-peers
 - Prepare role models to share the personal/professional aspects of their STEM journeys/interests

IF/THEN® Project Library

- Library features many resources such as printable exhibit panels, banners, and digital media
- You can also find hands-on activities to use during programs and events
- Developed using assets from the IF/THEN® Collection by ASTC-member museums and science centers
- Can adapt and replicate these projects for use in your own institutions

<https://www.ifthencollection.org/projectlibrary>

Lava Lamp Reactions

Meet Cora. She is a nuclear engineer. She became interested in engineering after learning about atoms in her high school chemistry class. Now she works on projects involving radiation detection and modeling. Today we're going to explore chemical reactions by making our own "lava lamps" - hopefully you have as much fun as Cora did.

"I hope you join me in the field of engineering. We together can solve problems and inspire the next generation of female scientists."
- CIARRA SIVELLS

MATERIALS:

- Empty water bottles, glass jars, or other plastic containers with a lid.
- Transparent cooking oil (corn oil or vegetable oil works best)
- Food coloring (oil is lighter than

INSTRUCTIONS:

1. Fill your bottle with water until 1/2 of the way to the top.
2. Mix color...

Get in the Game!
Grade Levels: 3-5
Duration: 90 min

Nothing beats boredom like board games! Students will build and practice all four computational thinking (CT) skills while designing their own game.

Flame the Challenge 15 min total

| | |
|-----------------|--------------|
| Activity | 30 min total |
| Materials | 8 tabs |
| Objectives | 8 tabs |
| Concepts/Skills | 8 tabs |
| Duration | 15 min |
| Grade Levels | 3-5 |

©The Worlds Museum 2021

The Bowers Institute

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The background is a solid teal color. It features several abstract network diagrams in a lighter teal and olive green. These diagrams consist of lines, nodes (small circles), and curved paths, suggesting a complex network structure. The lines are thin and the nodes are small, creating a subtle, technical aesthetic.

Network Sharing



Discovery World, Milwaukee, WI

Shannon Atwood, *Director of Exhibits & Experiences*

Girls & STEM at Discovery World

- **30+** partner organizations
- Full-activation of event spaces, educational labs, and exhibits
- In-person interactions and conversations with role models in STEM
 - Local companies
 - Diverse fields represented
 - Career Pathways
- Women-Owned Businesses Makers Market
- **IF/THEN Collection**
 - Poster Giveaways
 - Video biographies shown in the theater
 - Posters displayed throughout exhibit areas
 - Biographies used for social media leading up to the event





Meaningful Partnerships & Community Impact

- **Local** companies, **Local** STEM experts
- Over **12,000** participants since inception
- Access provided to Girl Scouts of Southeast Wisconsin, PEARLS for Teen Girls, COA Youth and Family Center, and Milwaukee Public Schools.
- Hands-on, conversational, and variety of activities for **ALL AGES**.
- **2,000** guests at 2024 event
- Next event is Sunday, March 2nd, 2025



Shannon Atwood

Director of Exhibits & Experiences
Discovery World
Milwaukee, WI

Contact Info:

Email: Satwood@discoveryworld.org

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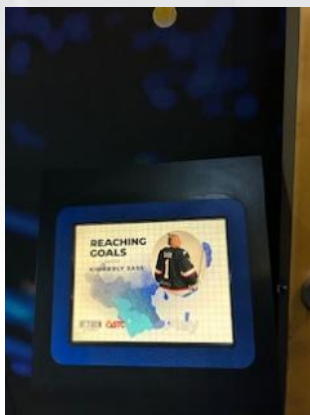
Museum of Science and Industry, Tampa, FL

Janet White, Director of Education

Museum of Science and Industry - Tampa

MOSI received the initial ASTC grant funding for the If/Then Initiative

- Incorporated Women in STEAM along the exhibit path
 - Videos from the collection are shown.



- Created a pop-up tent to take on outreach programs and community events that talks about several of the women in the If/Then Collection



Museum of Science and Industry - Tampa

Girls STEAM Cafe

- Think speed dating...but speed mentoring!
- Middle school young ladies rotate around to women in STEAM careers who share their story with them for about 10 minutes before they rotate to another mentor.





SHU Discovery Science Center and Planetarium, Bridgeport, CT

**Sarah Tropp-Pacelli, *Director of
Development and Data Management***



**WOMEN AND GIRLS AT SHU DISCOVERY SCIENCE
CENTER AND PLANETARIUM**

BRIDGEPORT, CT

**EARLY PROGRAMMING:
MIGHTY STEM GIRLS (2016)**

SCIENTIST BIOGRAPHIES, AUTOBIOGRAPHY

**TODAY: MIGHTY STEM GIRLS+
(2022-PRESENT)**

IF/THEN AMBASSADOR PROFILES



SCAVENGER HUNT AND EXHIBITS

CONNECT IF/THEN TO EXHIBIT THEMES AND
BRING REAL-WORLD PATHWAYS TO LIGHT



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Upcoming Opportunities For Organizational Members

Exhibit Kit 1: This is What a Scientist Looks Like Displays

- Free for all organizational members
- Created with input from you!
- You select the content themes and formats (ex. pop-up banners, metal prints, foam core posters)
 - Themes: Diving Deep (Marine Biology), Living Wild (Ecology), Reaching the Stars (Aerospace), Engineering New Paths (Engineering), and Powering the Planet (Planetary health)
- ASTC prints and ships directly to you

1. Select the content that best fits your work! Panels feature one IF/THEN® Ambassador scientist profile, insights into their field, and a reflection prompt.

2. You can also request a **large introductory panel** that includes all 125 Ambassadors.

3. Submit your request by **Summer 2025**. Requests processed on a rolling basis and typically ship in 3 - 4 weeks.

Living Wild as a
RESEARCH ECOLOGIST



Dr. Lindsey Rustad
Lindsey studied to live in the forest, so she became a forest scientist. She takes big risks to run large-scale experiments, live in a tent, study ice storms and studying them over a long time with tools like fire hoses and cybertechnology.

Did you know that used to be an older tree is considered an indicator of the effects of climate change on forests?
📍 Durban, MT

HEAVY ICE
Ice may seem temporary or harmless. But scientists discovered that even a small amount of ice, as thin as a half inch, can cause long-term damage, causing large branches to break.

Do you see evidence of ice damage in this picture?



ASTC Association of Science Teachers
IF/THEN

Living Wild as an
ENVIRONMENTALIST



Shyla Raghav
Shyla is a leading expert on climate change. She helps find solutions to global problems because she sees how they are affecting the quality of life for everyday people. The carbon calculator Shyla developed helps individuals measure their personal climate impact.

Did you know that your carbon footprint can affect the food you eat? By becoming a vegetarian, you may reduce your food's carbon footprint. How about you?
📍 Annapolis, VA

YOUR CARBON FOOTPRINT IS IMPACTED BY:

- your thermostat
- your electricity usage
- size of your home
- how often you shop for real things
- your recycling and composting
- how much meat and dairy you eat
- your water usage

What do you do to reduce your carbon footprint?

It takes 228 trees to absorb roughly the amount of CO2 the average person produces in a year (16 tons).



ASTC Association of Science Teachers
IF/THEN

Living Wild as a
SOIL ECOLOGIST



Dr. Yamina Pressler
Yamina is on a mission to make soil a household name. She studies soil biodiversity and the organisms that control how soil works. Yamina uses unexpected methods—such as feeding dimensions and growing watercolors—to educate the public on how soils form the very basis of our existence.

Did you know that the cells within your feet are one of the most diverse in the world? How about your nose? An apple core is your most common food. How many different types of microbes are there on it? How many types of habitats?

HEALTHY SOIL
There are many ways to determine if soil is healthy. One way is the amount of microscopic worms (nematodes) in the soil.

Can you find the nematode in this photo?



ASTC Association of Science Teachers
IF/THEN



Program & Events Stipends

- Organizational members can apply for **stipends of up to \$750**
 - Brief applications open in **early March**
- Awards will be **fulfilled in cycles:**
 - Cycle 1: Due April 2025
 - Cycle 2: Due June 2025
 - Cycle 3: Due July 2025
- Funds must be used to **showcase IF/THEN® Ambassadors through your programs, events, or spaces.** This could look like...
 - Paying for staff time and materials to incorporate IF/THEN® Ambassador content into existing museum programs or spaces
 - Bringing an IF/THEN® Ambassador to speak at an event virtually or in person
 - Activating a space that includes IF/THEN® Displays (such as welcome kit or exhibit kit content) through an event or Ambassador-focused activity





Resources and Upcoming Activities

Resources

Access resources at: <https://ngcproject.org/ifthen-champions-network>

- Links to IF/THEN® Initiative and Collection resources
- Instructions for requesting and downloading assets
- Media and branding guide
- Link to join the LinkedIn Group
- Details about upcoming webinars and an archive of past webinar recordings
- Details about network communications and an archive of past email communications



IF/THEN[®] Collection

Looking for resources to support gender equity in your classrooms and programs?

The **IF/THEN[®] Collection** is a free digital library with photos, videos, posters, and more, featuring diverse women STEM innovators – all available for educational and other non-commercial use. You'll find thousands of assets showcasing inspiring women whose jobs include training Olympic athletes, creating cosmetics, exploring space, working with animals, and designing everything from buildings and museum exhibits to prosthetics and medical equipment.

HOW TO GET STARTED

If you haven't already, please watch the [IF/THEN Collection](#) video. It's a quick overview of the site and our favorite resources. We recommend these entry points to find plug-and-play resources:

- **Activity Sheets** (www.ifthencollection.org/activity-sheets)
A compilation of all the puzzles, games, and hands-on educator guides and student activity sheets
- **Equity and Inclusion Assets** (www.ifthencollection.org/equity-inclusion)
A curated set of assets for afterschool and summer equity and inclusion
- **Educator Hub** (www.ifthencollection.org/educator)
A one-stop shop with ideas for using the Collection aligned with learning standards

Thank you for being part of the **IF/THEN[®] Champions Network**, a new network for individuals and ASTC member organizations interested in championing the **IF/THEN[®] Images of real women in STEM!**

In the email, we are sharing **new opportunities and resources** available to Champions Network members, including the opportunity to engage with other members at the **ASTC Annual Conference in September**, details about upcoming webinars, and more!

IF/THEN[®] CHAMPIONS NETWORK

Upcoming Activities

- **2025 Network Webinar Schedule**
 - May 28, 2025: **Exploring the Journeys of Women in STEM Careers**
 - July 16 and October 22, 2025 (topics TBD)
 - All webinars are 11 AM PT / 12 PM MT / 1:00 PM CT / 2:00 PM ET
- **2025 Virtual Meetups - informal networking**
 - April 23 and October 1, 2025
- **2025 Annual ASTC Conference: September 6-9, 2025, in the San Francisco Bay Area - mark your calendar now!**



Share Your Photos with Us!

We want to see photos of your exhibits, marketing materials, programming, or events that might feature IF/THEN® Initiative resources!

- Share with us through a quick survey, which we will add to the chat and share via email.
- You can also find a link on the network webpage:
<https://ngcproject.org/ifthen-champions-network>



Questions?

You can also email questions to
Emily Early at early@ngcproject.org

