

The logo features the word "SciGirls" in a stylized font. "Sci" is green, "Girls" is purple, and "Profiles:" is purple. Above the "i" in "Sci" is a small orange planet with a ring and a star. Above the "G" in "Girls" is a green gear. Below "Profiles:" is the text "SCIGIRLS IN SPACE" in a bold, orange, sans-serif font.

# SciGirls Profiles: SCIGIRLS IN SPACE

## **SciGirls in Space Role Model Training Evaluation**

**For**

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**June 2022**

## **Executive Summary**

On May 26<sup>th</sup>, 2022 the first of two SciGirls in Space Role Model Trainings took place. The trainings are designed to expose role models to the SciGirls program and SciGirls Strategies, help to develop and hone their skills to engage girls and youth in STEM, expose them to online resources to engage as STEM role models in classrooms and after school programs, and make them aware of and encourage them to join the FabFems searchable directory of women in STEM professionals.

During the training, the Role Models were exposed to each of the SciGirls Strategies and engaged in a learning activity to help them understand each strategy, its value, and implementation. Before and after the training, the Role Models were asked to complete a survey of their prior experience. The findings from that evaluation work are summarized here.

### ***Survey Findings***

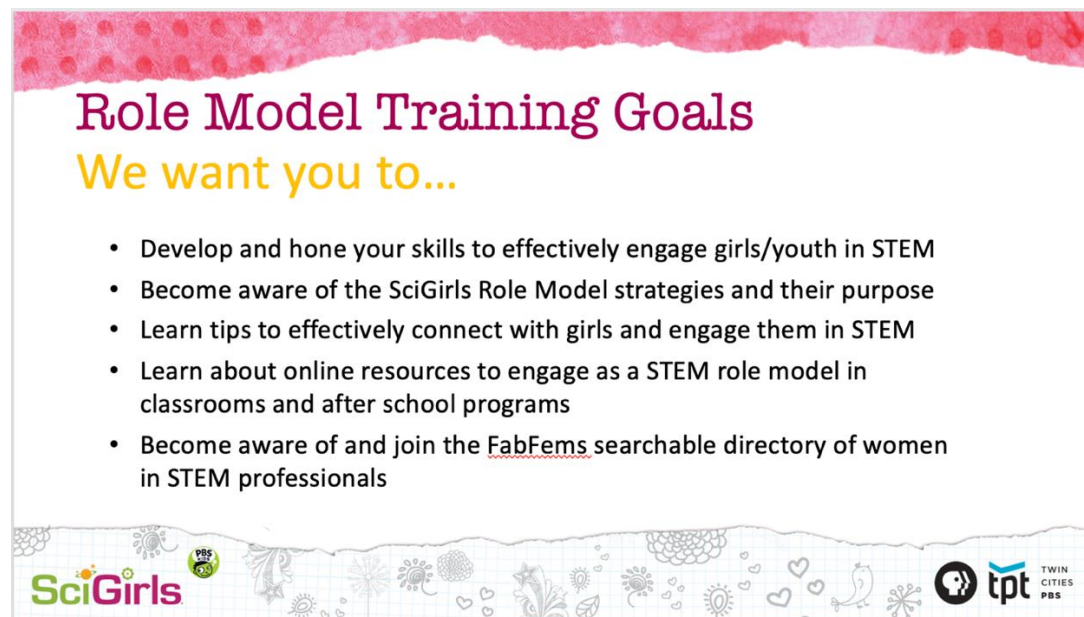
- All 18 participants completed the Pre-Training survey and 12 role models (67%) completed the post training survey.
- The reasons for wanting to be a role model were as diverse as the role models themselves with a common theme of wanting to help and inspire others as they themselves had been helped and inspired in the past. For others, they did not have a female role model and felt it is important to be there for the next generation now that they can.
- Ten of the roles models reported being role models in the past with many working both in-person and virtually. The remaining eight role models had not had that position formally in the past.
- There were a number of different things that role models wanted to get out of their experience including improving their communication skills, giving back to girls, the community, in general, gaining new strategies for presenting and sharing information, and sharing what they are passionate about.
- After the training, 67% reported being prepared (25%), well prepared (17%) or very prepared (33%).
- All the responding role models(100%) reported that the training was helpful for hearing others' thoughts and ideas, understanding what they are trying to convey as role models, and for generating a plan.
- Role models asked for some additional information and resources including a copy of a presentation that had been used at outreach events in the past, information on others' experience from the past, connections with the program to work out logistics, and details about their audiences when the time comes to work with them.
- 58% of the respondents self-report as BIPOC (Black, Indigenous, Person of Color).

## Background

The training took place on May 26<sup>th</sup>. The program will be implemented from May through October 2022. There is a second Role Model Training scheduled for August.

Participating sites that can request role models

- Ramapo Challenger Learning Center; NY
- Challenger Learning Center of Maine
- Pisgah Astronomical Research Institute, NC
- The Science Center of Iowa
- ExplorationWorks, MT
- The North Dakota Space Grant Consortium
- Girls Inc. Of Tennessee Valley
- WSKG, NY
- SpectrUM Discovery Center, MT
- Basic Enhancements, GA
- The Challenger Center of Northern Nevada
- Project Scientist, NC
- The National High Magnetic Field Laboratory, FL
- Scobee Education Center, TX
- Reading Public Museum, PA



The slide features a decorative top border with a pink watercolor-like pattern. The title "Role Model Training Goals" is in a purple serif font, and "We want you to..." is in a yellow sans-serif font. The list of goals is in a black sans-serif font. The bottom border is a white grid pattern with various icons and logos, including SciGirls, PBS, and TPT.

## Role Model Training Goals

We want you to...

- Develop and hone your skills to effectively engage girls/youth in STEM
- Become aware of the SciGirls Role Model strategies and their purpose
- Learn tips to effectively connect with girls and engage them in STEM
- Learn about online resources to engage as a STEM role model in classrooms and after school programs
- Become aware of and join the [FabFems](#) searchable directory of women in STEM professionals

SciGirls PBS TPT TWIN CITIES PBS

## Role Model Strategies from Research

1. Make a personal connection to dispel stereotypes
2. Use positive messaging to show how STEM makes the world a better place.
3. Share your passion
4. Make it hands-on and keep it interactive
5. Foster a growth mindset and promote perseverance
6. Show the way: offer resources and academic guidance for right here, right now

## 7. Follow up and provide feedback

### Pre-Training Survey Summary

Why did you sign up to be a role model?

The reasons for wanting to be a role model were as diverse as the role models themselves with a common theme of wanting the help and inspire others as they themselves had been helped and inspired in the past. For others, they did not have a female role model and feel it is important to be there for the next generation now that they can.

### Role model responses

- *It's important for me to inspire others! I'm also a Woman of Color, and think that's extra important for girls to see.*
- *I feel like I've gotten a lot of help in my life to get to where I am so I want to give back.*
- *I watched ALOT of PBS growing up and the shows shaped my childhood. My room was decorated with Barney, and I still can't spell the animal that Arthur is without singing A-a-r-d-v-a-r-k. Therefore, when I saw this opportunity, it really struck a chord with me. I had many great mentors growing up. Many who made me believe that a young girl from a small town in western PA could actually grow up and work for NASA. I'm truly living out my dream working for NASA and I want to share all my passion for space with others.*
- *I enjoy talking with the next generation, learning about their dreams and fears, and hopefully motivate them to actively participate in STEM.*
- *Always looking for ways to help inspire others*
- *I didn't have many female role models growing up, and was continually made fun of for wanting to work for NASA. I have always made an effort to both encourage young people to pursue their dreams, no matter how big they seem, and to inform them about the many opportunities available to them. I think I do this largely because no one ever did it for me, and very few people supported me in the beginning stages of my journey to get to where I am today.*
- *I love to share my passion about what I study on Earth and on other planets as well as my experiences to encourage others to follow that path or to discover it if they didn't know about it. Knowledge and curiosity are key components that I like to encourage to new generations.*
- *I want to inspire other girls to keep moving forward to know that no matter how long it takes to reach for the stars 🚀 never stop trying because I never did and here I am; I made it to NASA after 27 years!*
- *Think it's important to empower the next gen, wish I had such role models growing up, I enjoy mentoring*
- *As I transition from student to professional, I want to make public outreach a priority. I had a non-traditional path to becoming a scientist, so I feel strongly that anybody can become a scientist, but that having help, support, and encouragement is instrumental in doing so.*
- *representation is important. I went to a science camp for girls in middle school and it was a formative experience for me. I love speaking to kids about science. They ask such good questions that make me think about things in ways I hadn't before.*
- *I went into science education and outreach in order to encourage more underrepresented groups, such as girls, to enter science fields. When I was younger, I didn't think science was for me. I didn't realize how cool it is!*
- *I think it is important for young girls to see women of different backgrounds and learn that our research paths are not linear, that there is no "one right way" to be a scientist*
- *I enjoy inspiring youth, particularly girls*
- *To be an inspiration to the next generation of STEM leaders*
- *To reach out to young girls to consider a career in the planetary sciences.*

- *Enjoy engaging with students and helping them see themselves in STEM*
- *I have 3 girls that is important to be a great role model. Those 6 pairs of eyes is always watching and learning from everything I do. I have always wanted to give back for all the great role models I have had in my life. One of the gifts that I can give is to pass on my knowledge to those that look up to me.*

Do you have experience being a role model? If so, was that experience in person or virtual? Ten of the roles models reported being role models in the past with many working both in-person and virtually. The remaining eight role models had not had that position formally in the past.

#### Role model responses

- *No (3)*
- *Not in a formal "role model" way, but I've done lots of outreach, both in person and virtually (more the later recently).*
- *I have given outreach talks at every level from Kindergarten to Retirement homes and have spent time talking to kids about careers and going to college. I have done outreach both in-person and virtually.*
- *Yes, in person*
- *I'm not sure I'd say I've done something that was formally done "as a role model" but I think people can potentially be a role model to others without even knowing it. If I was a role model, I'd probably say it was during an in-person experience.*
- *Yes, both in person and virtual*
- *I did, I served as a NASA role model on three occasions. I was invited to be the "Special Presenter" and role model for the NASA MUREP Intern Welcome Event (virtually) were I shared a PowerPoint presentation to 95 NASA interns agency-wide highlighting my three NASA internships and sharing my inspirational story to inspire students and provided tips and advice to interns on maximizing their NASA internship experience. Secondly, I was invited to be a Presenter for the "Shadow Week at Wallops Flight Facility" event were I shared my educational path, an overview of my three NASA internship projects, and a Q & A session with prospective high school students (virtually.) Thirdly, I was invited to serve as a role model Panelist for NASA Community College Aerospace Scholars (NCAS) Intern Panel Event (virtually) were were I shared with an audience of ~ 150 NCAS students and NCAS Leaders a brief introduction about my academic journey and goals as an (NCAS) alumna. My favorite part was when I inspired other STEM students to reach for the stars 🚀 and apply for an OSTEM internship.*
- *Both (Virtual presentations, office hrs with students, student mentorship, and in-person demo booths, presentations, school visits, student mentorship)*
- *No I do not, however I do enjoy participating in engagement activities when they are available. I also used to teach public high school science before going to graduate school.*
- *I have not been an official Role Model, but I consider being a woman in science and at NASA to be a role model. I am also a role model to my children.*
- *I have had interns, both in person and virtual, and a high school mentee*
- *Yes, as a virtual mentor to undergraduate college women and have been an in-person panelist on being a woman in STEM on several occasions*
- *Yes, both virtual and in person*
- *Yes, Both in person and virtual*
- *Yes - both*
- *Yes, I was a elementary school substitute teacher and taught Sunday school for elementary, middle and high school ages.*

What do you hope to get out of this experience?

There were a number of different things that role models wanted to get out of their experience including improve their communication skills, give back to girls, the community, in general, gain new strategies for presenting and sharing information, and share what they are passionate about.

#### Role model responses

- *I just want to reach others and inspire, and remember the joy of what we all do.*
- *I think it's important to get better at communicating better with the general public, and it always helps to get a new perspective on how people perceive the things we work on.*
- *I just want to give back to PBS kids which helped shape my childhood. It is an amazing platform that can reach beyond typical areas. I want to be able to mentor about my love for science to others from smaller areas to show them that following these dreams are possible, even though space can seem so unattainable.*
- *Reflection and inspiration*
- *Additional strategies I can share with others. I periodically do "trainings" for SMEs I work with - and sharing useful strategies from trainings I attend is always a plus!*
- *I hope to inspire at least one person to go after their goals, no matter what other people say. I also hope to use my story to give someone hope, information, and resources they need as they consider a STEM career.*
- *I hope to be able to transmit my passion and encourage girls to discover and enjoy science. To make them curious about our planet and the universe. I find these kind of experiences very rewarding for me.*
- *Notes, not yet but plan to do so soon; I printed the SciGirls in Space role model guide and after attending the upcoming meeting. I hope to inspire at least "one" girl to see her worth, to understand how capable she is, and to believe she too can reach for the stars 🚀 and make an difference in the world and maybe someday be a SciGirls in Space role model too!*
- *I'm not sure, I hope that these types of activities help to change the idea of "what a scientist looks like" - hopefully students, whatever their background is, start to see themselves as possible future scientists.*
- *I hope to show girls that scientists look like they do and to introduce them to a field that they maybe never heard of.*
- *I'm excited to work directly with students!*
- *Tips on follow-up communications*
- *I hope inspire girls to dream big and pursue their goals. I also hope to gain a working relationship with SciGirls in Space and work closely in the future.*
- *I hope to inspire and motivate girls to pursue a career in the STEM fields and to be an example that it is possible to be female in the male dominated field.*
- *Outreach to low-income communities I grew up in.*
- *Reminder of best practices as a role model*
- *I hope to share, bond, and learn from this experience*

## Post-Training Survey Summary

### *Detailed Data Summary*

How prepared do you feel?

	N	%
Very prepared/Great	4	33%
Well prepared/Good	2	17%
Prepared	3	25%
Alright/Pretty well	2	17%
Bit confused	1	8%

Additional comments

- *I'm a bit confused on how to handle the interactive element. I would have liked more specific examples of that.*
- *Alright, but I think I'll know better once I have a match and talk to the teacher/coordinator!*
- *More than before, but never enough :)*

How helpful was this training?

	N	%
Very helpful/great	7	58%
Helpful	3	25%
Yes	2	17%


Additional comments

- *It was helpful to hear what other people think about the same topics, it jogged my own ideas about how to approach the strategies.*
- *It was great to understand what we are trying to convey as mentors-- very useful. I might have wanted to know specific assignments first thought? But that might be chicken/ egg.*
- *Nice to hear new perspectives which will be useful*
- *Very helpful generating a plan for being a role model*
- *Very helpful; it may be a small detail but I felt that having the "favorite color" question as part of the training was really useful in getting into the mindset of working with teenagers.*

## Effective Role Model Interactions

Preparing for success

- Know your audience in advance
- Plan what you are going to say and what activities you are going to do
- Be prepared for the unexpected
- Have fun!



What else do you need before your experience?

- *Nothing (3)*
- *Maybe a sample PowerPoint that's been used in an outreach event before.*
- *I think just to have an idea of what the institution is focusing and talk to the educators*
- *Info on the matching w role models and sites*
- *It would be helpful as a frame of reference to know examples of what other role models have talked about and done as hands on activities.*
- *What media I'll have available/ what's the format. Hosting the activity is the most intimidating part, so knowing whether/ how that will happen would be important.*
- *Once I'm matched with a group, I'm sure I can figure it out*
- *Connect with the program(s) to work out logistics and consider ideas.*
- *Details on who I'll be speaking with. Looking forward to it!*

Do you identify as BIPOC (Black, Indigenous, Person of Color)? This is helpful for us when connecting partners with role models. If possible, we feel it's important to pair role models that are representative of the youth involved in the program.

	N	%
Yes	7	58%
No	4	33%
No response	1	8%

Additional comments

- *I am Hispanic, Mexican American and 1st generation graduate student.*
- *I identify as a Latino/Hispanic. So, it would be maybe nice to partner me with institutions in which Latino/Hispanic students are present too.*
- *Yes-- half Puerto Rican, half Mexican (I'm not fluent in Spanish though, raised in U.S.- sorry!)*



Attendees were encouraged to sign up for FabFems after their training.

**FabFems Website**

FabFems is an international, online, searchable directory of women STEM professionals interested in outreach to girls

**Audience:**

- Role Models
- Girl-Serving Programs
- Parents and Girls

**www.fabfems.org**



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