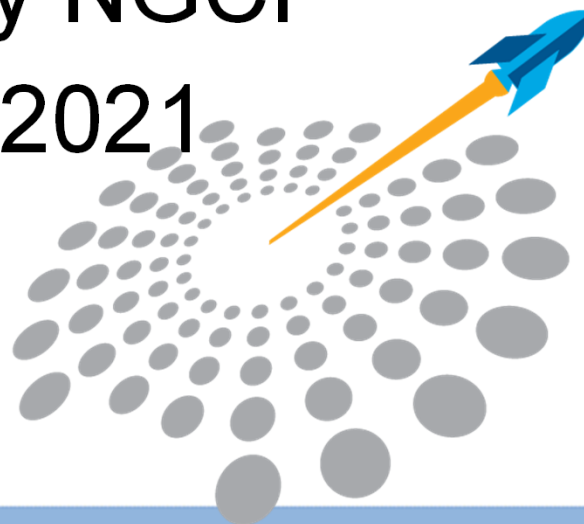# Incorporating STEM Role Models into Afterschool: Let's get started!

Million Girls Moonshot Webinar

Presented by NGCP

March 2, 2021

National Girls Collaborative Project

MILLION GIRLS MOONSHOT

Agenda

- Welcome & Agenda Overview
- STEM role models: What are they and why are they important?
- STEM role model video
- Strategies for finding STEM role models
- Small Group Discussion: Challenges to incorporating role models
- Questions & Closing

Overview of the Framework

EQUITY AND INCLUSION FRAMEWORK

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stem next OPPORTUNITY FUND

Strategies are the broad categories within each large concept: Broadening Participation, Youth-Centric, and Skill Development

Tactics are the specific categories for actions and tools for each strategy. The actions and tools under Tactics are specific equity and inclusion activities.

BROADENING PARTICIPATION		YOUTH-CENTRIC		SKILL DEVELOPMENT	
Strategy: Community Engagement	**Tactics:** • Communication plans for internal and external communication and outreach • Cross-sector partnerships to cultivate a STEM learning ecosystem • Family engagement activities	**Strategy:** Positive Youth Development	**Tactics:** • Address stereotypes • Leadership • Self-efficacy • Social and emotional learning • Youth voice	**Strategy:** Curriculum	**Tactics:** • Engineering mindset practices • Gender equitable and culturally responsive curriculum and strategies • Hands-on, inquiry based STEM activities
Strategy: Data Informed Decision Making	**Tactics:** • Evaluation to assess community needs • Use of research data to improve program quality	**Strategy:** Peer Support	**Tactics:** • Peer connections • Supportive environment	**Strategy:** Professional Development (for educators)	**Tactics:** • Micromessaging • Training to address gender- and culturally implicit and explicit biases • Training on culturally responsive practices
Strategy: Program Operations	**Tactics:** • Logistical, e.g. location, transportation, access to technology, etc. • Staffing recruitment and retention	**Strategy:** Supportive Relationships	**Tactics:** • Community connections • Role models • Skilled staff	**Strategy:** 21st Century Skills	**Tactics:** • Collaboration • Growth mindset • Social and cultural awareness
Strategy: Program Design (quality and intentionality)	**Tactics:** • Stakeholders involvement in program design	**Strategy:** Relevance	**Tactics:** • Connect programming to school, home, and other settings • Leverage youth interests, knowledge, and lived experiences • Personally relevant learning	**Strategy:** Connected Pathways	**Tactics:** • Career exploration • Curated partnerships between programs

CULTURAL RESPONSIVENESS is an approach to equitable and inclusive STEM education.
- Integrate cultural responsiveness in every aspect of the framework to foster equity and inclusion in STEM education.
- Recognize and include culturally responsive practices (CRP) at the organizational, personal, and instructional levels.

Broadening Participation: Culturally responsive practices value and build on youth's culture, language, and experiences

Youth-Centric: Design and implement programming with the strengths, needs, and challenges of youth in mind

Skill Development: Culturally responsive practices enable youth to develop STEM and 21st century skills

What are STEM role models?

- STEM student or professional (someone who uses STEM)
- In-person, virtual, via media, famous or not
- Positive representation
- Counters stereotypes of *what* STEM is and *who* does STEM

AMELIA
[BIÓLOGA]

I'm Amelia Merced. I'm a biologist and work as a microscopist.

DR. HAYAT SINDI

SCIENTIST AND INNOVATOR. FIRST SAUDI WOMAN WITH A BIOTECHNOLOGY PH.D FROM CAMBRIDGE.

HAYAT HAS SPENT MOST OF HER LIFE BREAKING NEW GROUND. CO-FOUNDER OF DIAGNOSTICS FOR ALL WHICH BENEFITS POORER PEOPLE, AND THE I2 INSTITUTE TO INSPIRE YOUTH, SHE HAS DEVOTED HER LIFE TO MAKE THE WORLD A BETTER PLACE.

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What are STEM role models?

Role model vs mentor

- Short-term vs. sustained, long-term relationship
- Provide information, serve as an example vs guidance

Quite literally, a role model is someone who models a role. They serve as an example from whom others can gain insight, be inspired, and self-identify. A role model does not imply any particular relationship between people; rather it is someone with qualities that are considered valuable and desirable by others. (FabFems.org)

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What are STEM role models?

Mae Jemison is a role model to me because she is a barrier-breaker. She was the first Black woman to travel into space. She blazed a trail of fiery fame and encourages others to stand against racism and follow their dreams. (5th grade student)

Why STEM role models?

Exposure to diverse STEM role models...

- Increases interest in STEM
- Increases positive attitudes toward STEM
- Dispels stereotypes about STEM and who does STEM
- Results in stronger identification with STEM
- Increases self-efficacy and self-concept in STEM
- Increases sense of belonging
- Increases awareness of STEM careers

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STEM role models: key elements

- Supportive, engaging, relatable
- Diverse - background, race, ethnicity, career pathway, STEM career
- Enthusiastic about learning, especially STEM
- Honest about experiences
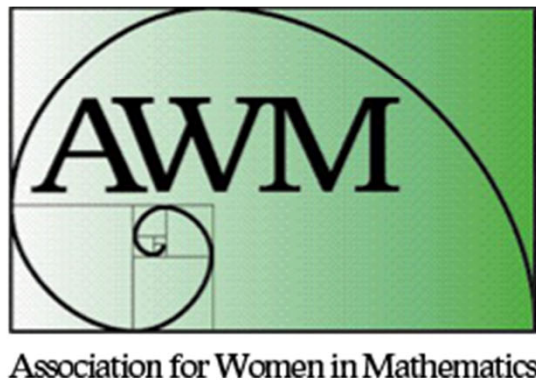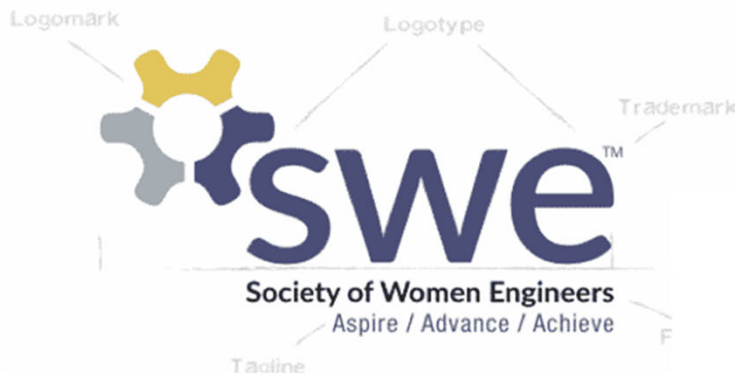- Discusses life outside of STEM (pets, family, hobbies)

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Finding STEM Role Models

FabFems Role Model Database

Role Model Directory: FabFems is an international, online, searchable directory of women STEM professionals interested in outreach to girls
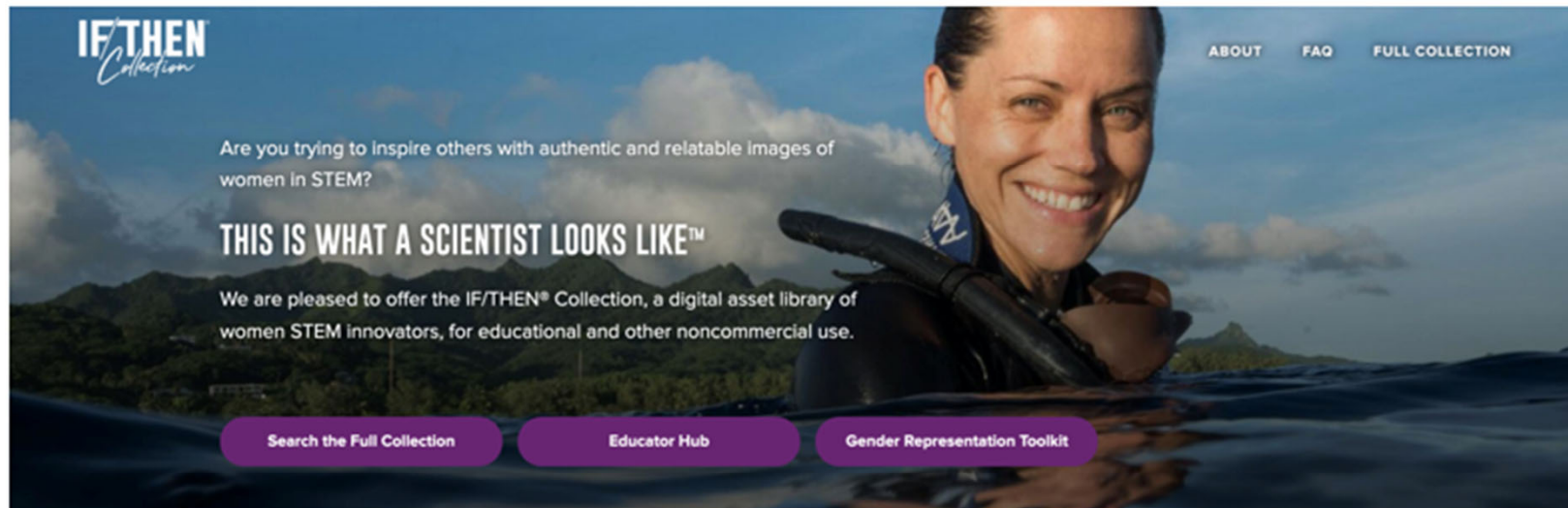
Audience:
Role Models
- Programs
- Parents and Girls

www.fabfems.org

FabFems

Connect with us

Share your past.
Spark a future.

Find a Role Model ▶
Become a Role Model ▶

About FabFems

FabFems are women from a broad range of professions in science, technology, engineering and mathematics (STEM). They are passionate, collaborative, and work to make the world a better place. Many girls have similar interests but aren't connected to adults who exemplify the STEM career pathway. **This is where you come in.** Create a FabFems profile to expand girls' career options, dispel stereotypes and spark their interests - just by being you.

Learn More About the FabFems Project

IF/THEN Collection

Searching the IF/THEN Collection

Think Local!

Who can you connect with in your community?

Role Model Experiences

Question #1: *Do you have an example of incorporating a STEM role model in your network/program?*

Question #2: *What are the challenges for afteschool programs related to STEM role models?*

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Resources

- [Equity & Inclusion Framework website](#)
- [FabFems role model directory](#)
- [If/Then Collection](#)
- [SciGirls role model videos](#)
  - [Real women. Real jobs.](#)
  - [Latinas at work](#)
- [Free STEM role model posters](#)
- [Techbridge Girls](#)

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Future Opportunities

Million Girls Moonshot Webinars

- **Incorporating STEM role models into afterschool: strategies, examples, and resources**

    March 23, 2021; 1:00-2:00pm PDT/4:00-5:00pm EDT

- **Role Models Matter 101 (Techbridge Girls)**

    April 13, 2021; 1:00-2:00pm PDT/4:00-5:00pm EDT

- **STEM role models in action**

    April 27, 2021; 1:00-2:00pm PDT/4:00-5:00pm EDT

Register: https://stemnext.org/mgmwebinars/