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

Million Girls Moonshot Webinar
Presented by NGCP
March 2, 2021
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**

**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

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<th>Strategy</th>
<th>Tactics</th>
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| Community Engagement| - Communication plans for internal and external communication and outreach  
                      | - Cross-sector partnerships to cultivate a STEM learning ecosystem      
                      | - Family engagement activities                                          |
| Data Informed       | - Evaluation to assess community needs                                  
                      | - Use of research data to improve program quality                      |
| Program Operations  | - Logistical, e.g. location, transportation, access to technology, etc.  
                      | - Staffing recruitment and retention                                    |
| Program Design      | - Stakeholders involvement in program design                            |

## Youth-Centric

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| Positive Youth Development | - Address stereotypes                                                   
                      | - Leadership                                                            |
                      | - Self-efficacy                                                         
                      | - Social and emotional learning                                         
                      | - Youth voice                                                           |
| Peer Support               | - Peer connections                                                      
                      | - Supportive environment                                                |
| Supportive Relationships   | - Community connections                                                 
                      | - Role models                                                           
                      | - Skilled staff                                                         |
| Relevance                  | - Connect programming to school, home, and other settings               
                      | - Leverage youth interests, knowledge, and lived experiences            
                      | - Personally relevant learning                                          |

## Skill Development

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| Curriculum                      | - Engineering mindset practices                                         
                      | - Gender equitable and culturally responsive curriculum and strategies |
                      | - Hands-on, inquiry based STEM activities                               |
| Professional Development (for educators) | - Micromessaging                                                      
                      | - Training to address gender- and culturally implicit and explicit biases|
                      | - Training on culturally responsive practices                          |
| 21st Century Skills             | - Collaboration                                                         
                      | - Growth mindset                                                        
                      | - Social and cultural awareness                                         |
| Connected Pathways              | - Career exploration                                                    
                      | - Curated partnerships between programs                                 |

## Cultural Responsiveness

- 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
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)
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
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)
Finding STEM Role Models

- Society of Women Engineers
- National Society of Black Engineers
- National Center for Women & Information Technology
- Association for Women in Science
- Association for Women in Mathematics
- Intel
- Benevity
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

Share your past. Spark a future.
IF/THEN Collection

Are you trying to inspire others with authentic and relatable images of women in STEM?

THIS IS WHAT A SCIENTIST LOOKS LIKE™

We are pleased to offer the IF/THEN Collection, a digital asset library of women STEM innovators, for educational and other noncommercial use.

Search the Full Collection  Educator Hub  Gender Representation Toolkit
Searching the IF/THEN Collection

Use the search box and filters below to narrow your results

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Type

Discipline

Location

Ambassador Name
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 afterschool programs related to STEM role models?
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
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/