Welcome to the NGCP National Webinar

Picture a Scientist:

Bringing Gender Equity in Science to the Big Screen

Tuesday, October 13, 2020

Please respond to the poll and introduce yourself in the chat.

Use the chat to ask questions, respond to one another, and share resources.

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

ASTC Association of Science and Technology Centers

Afterschool Alliance

AccessSTEM

SciGirls

Google

STUDENT RESEARCH foundation

NGCP Vision

The National Girls Collaborative Project **brings together organizations** committed to informing and encouraging girls to pursue careers in science, technology, engineering, and mathematics (STEM).

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

NGCP Goals

1. **Maximize access** to shared resources within organizations interested in engaging girls in STEM.
2. **Strengthen the capacity** of programs by sharing exemplary practice research and models.
3. **Use the leverage of a network** to achieve gender equity in STEM.

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

NGCP Activities

THE CONNECTORY

FabFems

IF/THEN® Collection

Increased Collaboration Benefits Girl-Serving STEM Programs

Helped us better **serve girls**	Increased girls' **interest in STEM**	Helped my program be more **effective**	Increased girls' **confidence in STEM**
82%	78%	77%	77%

Source: NGCP 2015 Annual Survey

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

National Network of Collaborative Teams

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

Picture a Scientist speakers:

Raychelle Burks, Associate Professor of Chemistry at American University in Washington, DC

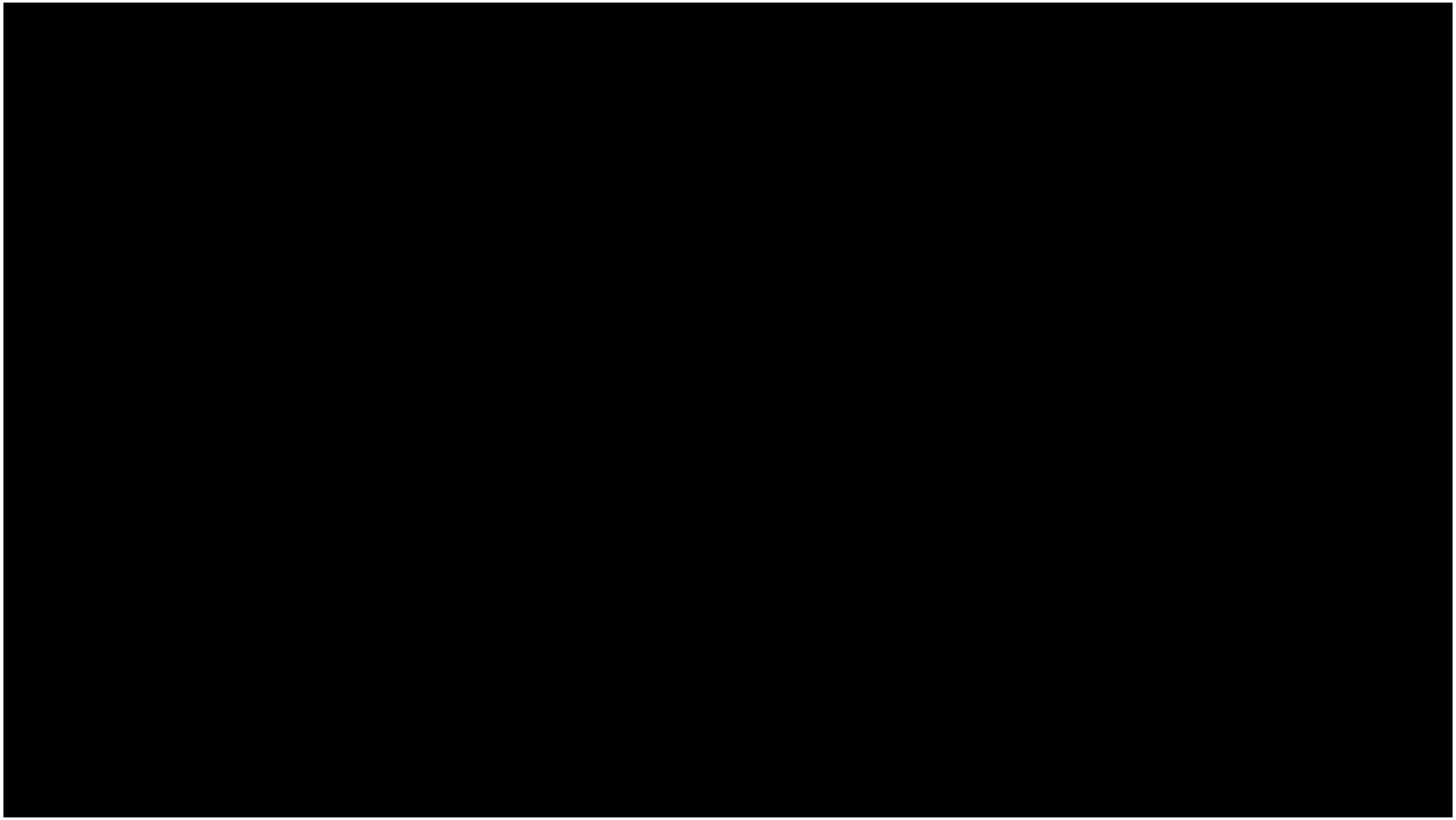
Manette Pottle,
Documentary Film Producer

Sharon Shuttack,
Director & Producer

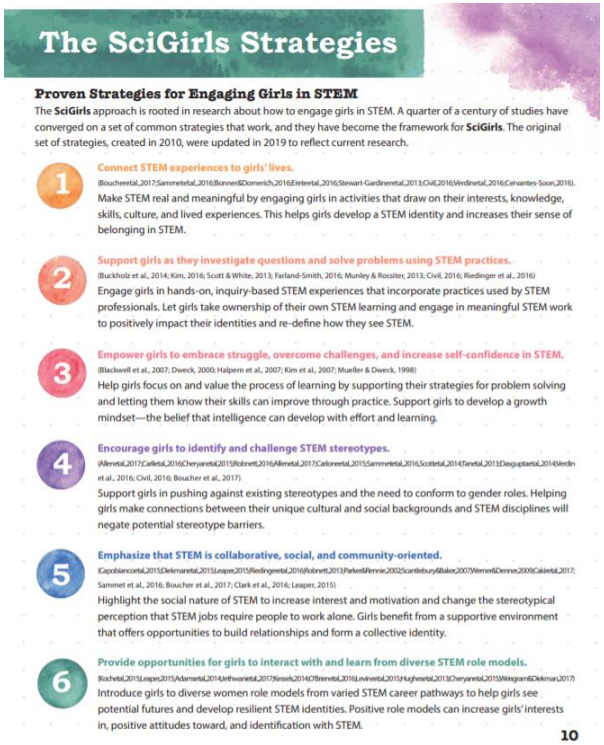
NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project

Picture a Scientist trailer



Resources to Support Gender Equity in STEM



The SciGirls Strategies

Proven Strategies for Engaging Girls in STEM

The **SciGirls** approach is rooted in research about how to engage girls in STEM. A quarter of a century of studies have converged on a set of common strategies that work, and they have become the framework for **SciGirls**. The original set of strategies, created in 2010, were updated in 2019 to reflect current research.

1. **Connect STEM experiences to girls' lives.**
(Boucher et al., 2017; Sammet et al., 2016; Bonner & Domerich, 2016; Eiter et al., 2016; Stewart-Gardiner et al., 2013; Civil, 2016; Verdin et al., 2016; Cervantes-Soon, 2016).
Make STEM real and meaningful by engaging girls in activities that draw on their interests, knowledge, skills, culture, and lived experiences. This helps girls develop a STEM identity and increases their sense of belonging in STEM.

2. **Support girls as they investigate questions and solve problems using STEM practices.**
(Buckholz et al., 2014; Kim, 2016; Scott & White, 2013; Farland-Smith, 2016; Munley & Rossiter, 2013; Civil, 2016; Riedinger et al., 2016)
Engage girls in hands-on, inquiry-based STEM experiences that incorporate practices used by STEM professionals. Let girls take ownership of their own STEM learning and engage in meaningful STEM work to positively impact their identities and re-define how they see STEM.

3. **Empower girls to embrace struggle, overcome challenges, and increase self-confidence in STEM.**
(Blackwell et al., 2007; Dweck, 2000; Halpern et al., 2007; Kim et al., 2007; Mueller & Dweck, 1998)
Help girls focus on and value the process of learning by supporting their strategies for problem solving and letting them know their skills can improve through practice. Support girls to develop a growth mindset—the belief that intelligence can develop with effort and learning.

4. **Encourage girls to identify and challenge STEM stereotypes.**
(Allen et al., 2017; Carli et al., 2016; Cheryan et al., 2015; Robnett, 2016; Allen et al., 2017; Carlone et al., 2015; Sammet et al., 2016; Scott et al., 2014; Tanet al., 2013; Dasgupta et al., 2014; Verdin et al., 2016; Civil, 2016; Boucher et al., 2017).
Support girls in pushing against existing stereotypes and the need to conform to gender roles. Helping girls make connections between their unique cultural and social backgrounds and STEM disciplines will negate potential stereotype barriers.

5. **Emphasize that STEM is collaborative, social, and community-oriented.**
(Capobiancoet al., 2015; Dekmar et al., 2015; Leaper, 2015; Riedinger et al., 2016; Robnett, 2013; Parker & Rennie, 2002; Scantlebury & Baker, 2007; Vernet & Denner, 2009; Cakir et al., 2017; Sammet et al., 2016; Boucher et al., 2017; Clark et al., 2016; Leaper, 2015)
Highlight the social nature of STEM to increase interest and motivation and change the stereotypical perception that STEM jobs require people to work alone. Girls benefit from a supportive environment that offers opportunities to build relationships and form a collective identity.

6. **Provide opportunities for girls to interact with and learn from diverse STEM role models.**
(Kochet al., 2015; Leaper, 2015; Adamset al., 2014; Jethwaniet al., 2017; Kessels, 2014; O'Brien et al., 2016; Levine et al., 2015; Hughes et al., 2013; Cheryan et al., 2015; Weisgram & Dekman, 2017)
Introduce girls to diverse women role models from varied STEM career pathways to help girls see potential futures and develop resilient STEM identities. Positive role models can increase girls' interests in, positive attitudes toward, and identification with STEM.

10

[NGCP Resources: Engaging Girls in STEM]

[SciGirls Strategies: How to Engage Girls in STEM]

National Girls Collaborative Project

NATIONAL GIRLS COLLABORATIVE PROJECT

Upcoming NGCP Webinars

Register on the NGCP website

NATIONAL GIRLS COLLABORATIVE PROJECT

National Girls Collaborative Project