Practices for Educators
Research-based Guidance for Supporting Girls' STEM Identity Development in Online Spaces

Building on the successful learnings of the Brite Program, these six practices are for educators to support middle and high school girls in developing positive STEM identities and can be integrated into your own programming.

Prioritize Community Building around STEM

1. Encourage girls to share their lived experiences, interests, and hobbies (both STEM and non-STEM related) through facilitated discussions.

WHY: To foster connection through shared interests with peers and educators, and help girls see how STEM connects to their lives.

HOW: Engage girls in facilitated discussions through daily icebreakers in small groups, weekly large group discussions, collaborative activities, and daily platform forum discussions.

BRITE EXAMPLE: Technology Babies Icebreaker: Girls were prompted to think back to their first memories using digital technology. *How old were you? What type of technology did you use? What else do you remember?*

2. Provide multiple modalities for girls to engage with and support peers, educators, and role models.

WHY: To help girls build connections with peers, educators, and role models.

HOW: Provide opportunities for girls to engage with others through video/audio conferencing tools, an online forum space for conversation on daily prompts, and profile features where girls can share more about their own interests, while also learning about others' interests.

BRITE EXAMPLE: The Forum was a shared space on the platform where all community members could share their perspectives on the Question of the Day, such as *What kind of music do you enjoy listening to? How can you use engineering skills to solve problems in your daily life?*

Collaborate with Role Models

3. Recruit and prepare role models who challenge stereotypical perceptions of STEM.

WHY: To provide multiple opportunities for girls to connect with STEM role models who break stereotypes about STEM people and career pathways.

HOW: Recruit and prepare STEM professionals in your community or use free digital resources like the IF/THEN® Collection to counter STEM stereotypes through role models' identities and lived experiences, career pathways, and hobbies.

BRITE EXAMPLE: Through one-on-one meetings and a virtual group training, role models were trained to share their early life experiences, STEM hobbies and interests, hobbies and interests outside of STEM, any challenges and barriers they faced, and how they persevered.

4. Prepare role models to share their STEM stories in interactive, conversational ways that encourage girls' participation and provide opportunities to recognize girls' contributions.

WHY: To support girls in sharing their skills, interests, and lived experiences through interaction with role models, while also receiving real-time recognition for their contributions from role models.

HOW: Help role models develop their STEM stories and interactive presentations through training, resources, and meetings.

BRITE EXAMPLE: Girls played Would You Rather (STEM jobs edition) with Volcanologist Jess Phoenix, an opportunity to reflect on STEM jobs they might enjoy, and to receive feedback and appreciation for their contributions from the role model. *Would You Rather—dive into the ocean's dark depths or travel to space? Would You Rather—gather lava samples at an active volcano or conduct research on dangerous viruses?*

Incorporate Hands-On Projects that Weave Art and Creativity into STEM

5. Encourage girls' creativity and self-expression.

WHY: To help girls discover new and shared interests and experience firsthand how creativity and self-expression connect to STEM.

HOW: Engage girls in open-ended activities that integrate artistic creation with STEM content, offer more/less challenging options based on age and previous STEM experiences and knowledge, offer options for how to approach an activity, and connect activities to the role models to demonstrate relevance.

BRITE EXAMPLE: Girls designed an article of clothing that combined fashion with STEM related to the work of role model Beata Mierzwa. Girls chose to design digitally using Sketchpad or with arts/crafts supplies. The activity was simplified by focusing on the basic design, or a challenge was added by researching and writing about the science behind their design.

6. Provide opportunities for recognizing girls' projects and learning processes by peers, educators, and role models.

WHY: To provide all community members with opportunitie to recognize girls' STEM interests, ideas, and skills, including challenges, mistakes, and how they persevered through an activity.

HOW: Establish ways for community members to recognize girls' projects and learnings through a live online project showcase hosted using video/audio conferencing tools. Leverage platform features, including chat, digital badges, and an online gallery space where girls are able to share their completed projects and recognize/respond to others' work through comments and likes.

BRITE EXAMPLE: Girls posted a photo or video of their graphic novels (including inspiration, design, challenges, and surprises) to the Brite Gallery. All community members could like and comment in the Gallery. Every Friday, girls also shared their favorite projects and highlights in the Brite Fest Project Showcase on Zoom, receiving recognition from the host, peers, and educators.

National Girls Collaborative Project

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SMART*girls* HQ

FSU FLORIDA STATE UNIVERSITY