

# Evidence Quality and Reach Hub: How to Position Your Work for NSF DRK-12 STEM Education Research and Design Funding Opportunities

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## Positioning Yourself and Your Institution

April 16, 2024



# Welcome Activity

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**Time:** 5 minutes

## **Instructions:**

In the chat, please share your name, organization, and one asset that you or your partner possess.



# Virtual Meeting/Conference Recording Notice

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The American Institutes for Research® (AIR®) allows for the recording of audio, visuals, participants, and other information sent, verbalized, or utilized during business-related meetings. By joining a meeting, you automatically consent to such recordings. Any participant who prefers to participate via audio only should disable their video camera so only their audio will be captured. Video and/or audio recordings of any AIR session shall not be transmitted to an external third party without the permission of AIR.

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# AIR Inclusive Meeting Guidelines

## Hosting and Participating in Meetings

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**ENGAGE EVERYONE**



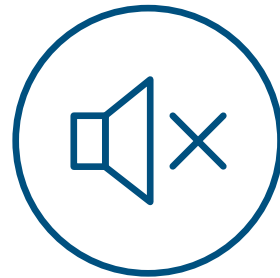
**BE HEARD AND SEEN**



**ACKNOWLEDGE SPEAKER**



**MAXIMIZE MICROPHONES**



**MINIMIZE NOISE**



**MAXIMIZE VISUAL DISPLAYS**

*Note.* These guidelines are intended to improve the meeting experience for virtual participants, as well as people with hearing loss, visual impairment, and those for whom English is an additional language. Developed by the Access AIR and AIR CREW Employee Resource Groups with support from the AIR Diversity and Inclusion Office.

# EQR Hub

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The Evidence Quality and Reach (EQR) Hub will provide current and aspiring STEM education researchers **targeted learning opportunities regarding research methods, knowledge translation, and DEI**. The hub will develop and implement virtual webinars and workshops for researchers in the Discovery Research PK–12 (DRK–12) community, convene communities of practice, and engage in individualized consultations with DRK–12 projects.



This work is made possible by the National Science Foundation (NSF) under Grant No. 2101162.

# Community of Practice Sessions

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**Session 1:** Understanding the DRK–12 Program and Solicitation

**Session 2:** Insights From Current and Past NSF Grantees From Minority Serving Institutions

**Session 3:** Positioning Yourself and Your Institution Using Asset-Based Framing

**Session 4:** Positioning Your Research for DRK–12



# Working Assumptions



You are important to this process.



Everyone has wisdom; **we need your voice!**



Assume positive intent. **This is a safe space of mutual learning.** It is also a continual process.



These may be sensitive topics—patience and empathy are important.

# Norms



Active listening and engagement. **Participate and share your ideas!**



Questions or comments? Use the “Raise Hand” feature.



**Cameras on: Encouraged!**



Audio: Mute and unmute. Be mindful of background noise.

# Meet the Moderator

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**Dr. Mercy Mugo**

*Executive Director*

*Quality Education for Minorities Network*

[mmugo@gem.org](mailto:mmugo@gem.org)



# Session 3 Agenda and Objectives

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Mercy Mugo

# Session 3 Agenda

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1. Session Objectives
2. Recap DRK–12 Solicitation and NSF Merit Review Criteria
3. Discuss How to Leverage Personal and Institutional Capabilities/Assets
4. Breakout Session: Sharing Personal, Professional, and Institutional Assets
5. Whole-Group Reflection
6. Next Steps

# Session 3 Objectives

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By participating in this session, attendees will:

- gain insights on articulating the impact and significance of proposed work in alignment with NSF's merit review criteria,
- identify personal, professional, and institutional strengths to address DRK-12 solicitation, and
- document the professional development and institutional supports needed to create a competitive DRK-12 proposal.

# NSF's DRK-12 Program

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DRK-12 program is the *only* NSF program that supports applied research and development at the PK-12 level in all areas of formal STEM education. In this way, the program is foundational to NSF's ability to achieve its goals regarding postsecondary education and workforce development.

The program invests in projects with potential to immediately address longstanding challenges, inequities, and opportunities in formal education. It also invests in proposals that anticipate and provide the foundation for formal PK-12 STEM education as it could be in future decades.

# Discovery Research PK–12 (DRK–12)

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**DRK–12 Program Goal:** Catalyze research and development that enhances all PK–12 teachers’ and students’ opportunities to engage in high-quality learning experiences related to the sciences, technology, engineering, and mathematics (STEM).

## Objectives

1. Build knowledge about how to develop PK-12 students’ and teachers’ STEM content knowledge, practices, and skills.
2. Support collaborative partnerships among STEM education researchers and STEM education practitioners and school leaders.
3. Build the field of STEM education by supporting knowledge synthesis and the development of novel and robust assessments of teacher and student learning, engagement, and skills.

**Outcomes** can include promising, evidence-based products and methods that can be used by others to support the success of all teachers and all students (e.g., curriculum, teaching and research tools, models of collaboration).

# DRK-12 Program Structures

## Strand

Teaching

Learning

## Project Type

Exploratory

Design & Development

Impact

Implementation & Improvement

Measurement & Assessment

Synthesis

Partnership Development

Workshops/Conferences

## Funding Level

I: \$450,000, 3 years

II: \$3,000,000, 4 years

III: \$5,000,000, 5 years

Synthesis: \$600,000, 3 years

Partnership Development: Up to \$100,000, 1 year

Workshops/Conferences: Up to \$200,000, 1 year



# Intellectual Merit

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- Potential to advance knowledge within/across fields
- Creative, original, potentially transformative
- Well-reasoned and organized ideas and experiments
- Qualified investigators
- Adequate resources

*Note.* Bianca Garner, Program Officer, Molecular and Cellular Biosciences, National Science Foundation.





NSF Merit Review Criteria:

## Broader Impacts

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- Potential to benefit society
- Promote teaching, training, and learning
- Enhance infrastructure and resources
- Engage in outreach to community
- Build or enhance partnerships
- Broad dissemination to enhance scientific and technological understanding

*Note.* Bianca Garner, Program Officer, Molecular and Cellular Biosciences, National Science Foundation and Advancing Research Impact in Society (ARIS).

# Questions

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# Leveraging Personal and Institutional Capabilities/Assets

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Mercy Mugo

# Leveraging Personal and Institutional Capabilities/Assets ...

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Shift focus from deficiencies to strengths.



Describe your and/or your team's talents, skills, experiences.



Cultivate a mindset of success (e.g., be creative, confident in your ability, pay attention to details).



Embrace the sharing of ideas, perspectives, information, and innovations.



Utilize available resources and opportunities (e.g., NSF virtual hours, grant writing trainings).

# Leveraging Personal and Institutional Capabilities/Assets ...

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Focus on the unique aspects of the institution (e.g., resources, facilities, equipment).



Highlight successful past projects through results of related prior funding.



Tap into your network, illustrate how a connection could lead to better outcomes.



Leverage institutional proximity to diverse communities and resources.



Represent authentic partnerships (e.g., activities that aligns with budgets, letters of collaborations).



# Activity: Breakout Session

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**Time:** 20 minutes

**Instructions:** In the breakout session, participants will engage in interactive discussions sharing their personal experiences, professional competencies, and institutional resources, and how they would leverage these to develop successful DRK-12 proposals and/or implement funded projects.



# Breakout Session: Discussion Prompts

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- What skills and expertise do you bring to a DRK–12 project?
- What institutional structures at your campus would facilitate the submission and execution of a successful DRK–12 project?
- How would you leverage the power of your personal and institutional assets to strengthen your DRK–12 proposal?
- What partnerships would you consider pursuing to strengthen your DRK–12 proposal?

# Whole-Group Reflection

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**Time:** 10 minutes

**Instructions:** Take a moment to reflect on the breakout discussion and share something that you found enlightening to your proposal development efforts.



# Next Steps

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Mercy Mugo and Grace McCall

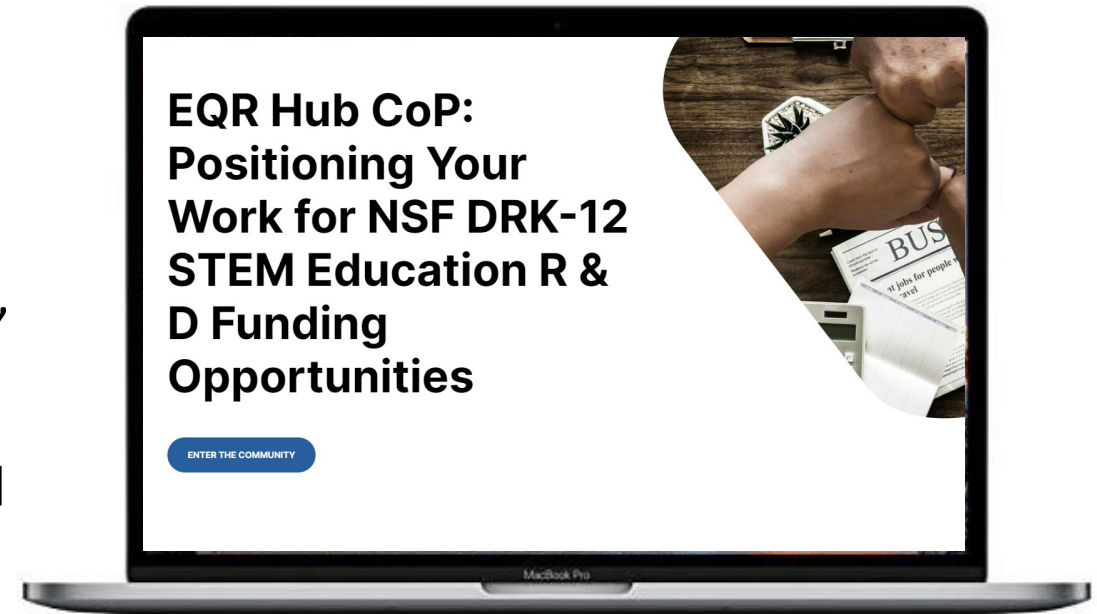
# Intersessional Activity

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**Time:** Complete prior to Session 4

**Instructions:** Use the NSF Project Summary template to draft a one-page proposal summary that includes:

1. Overview of project objectives, and how it aligns to the goal of the DRK–12 program, research methods, and planned activities.
2. Statement on the intellectual merit of the proposed activity.
3. Statement on the broader impacts of the proposed project.



[CoP Learning Space](#)



# Thanks for attending!

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