

# Discovery Research PreK-12 Program

## **Partnership Development Project Type Information Session**

### Solicitation 23-596

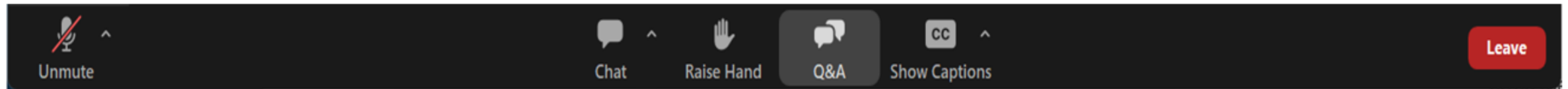
June 11, 2024

1-2:30pm Eastern

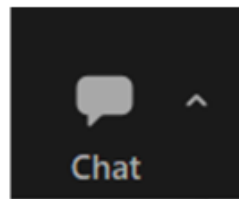


Thank you for joining today's webinar.

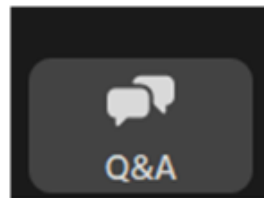
**Key controls** are found at the bottom of the Zoom window. Hover your mouse to view this bar:



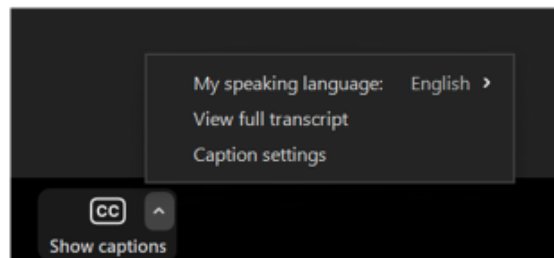
**Participants are muted.** Please use the Chat and Q&A features for communication.



**Chat:** Use the Chat feature to communicate with other participants or ask for tech support.



**Q&A:** Use the Q&A to ask the presenters questions. Check the “send anonymously” box to ask your question anonymously.



**Closed Captions:** Click the “CC” button to enable closed captioning. If you speak another language, you can select that here.

Thank you for joining us today.

Thank you for all you do for STEM education  
*every day.*



# Objectives for this information session

1. Clarify / elaborate on language in the current DRK-12 solicitation about the new partnership development project type.
  - Address questions submitted in advance.
  - Field new questions posted via the Q&A function.
  - Questions that are not addressed today can be directed to the DRK12 program Inbox, [DRLDRK12@nsf.gov](mailto:DRLDRK12@nsf.gov)
    - Please put 'Partnership Dev' in the subject line.
2. Foster communication between NSF and the field regarding partnership development in the context of STEM education research.
  - Point to other project types/funding opportunities.



# DRK12 Partnership Development Project Type Description (NSF 23-596)

**NEW: Partnership Development.** Partnership Development proposals can request up to \$100,000 for one year. The Project Description is limited to 8 pages. Submissions that exceed this limit will be returned. Funding of partnering organizations must be requested via subawards. Separately submitted collaborative proposals will not be accepted.

Connections and co-design among district and school administrators, teachers, researchers, and other community stakeholders are critical infrastructure in applied research and development efforts situated in formal education settings. Partnership Development projects must include school partners and researchers. **Projects are expected to lead to the development of a research and development project that is responsive to the DRK-12 solicitation.** Proposals should articulate how and why they seek to intentionally build new, or expand existing, collaborations as well as a clear statement of how the activities will result in, or contribute to, DRK-12 research and development program goals. Proposals should provide a clear plan and/or framework for fostering relationship development, power sharing, respectful decision-making, and identifying future proposed projects that ensure reciprocal benefits. Activities within the scope of this project type include, but are not limited to, multidisciplinary workshops, stakeholder meetings, project planning and explorations regarding the positioning and capacity of the team to work together to advance formal PreK-12 STEM teaching and learning. Proposals should have a formal mechanism to assess the project's progress and describe the steps that will be taken to effectively provide feedback on what's working and not working in the planning and partnership processes, and how to make improvements in the functioning of the team to progress toward DRK-12 program goals.

# Partnership development as an umbrella concept

- The partnership development project type is not intended to advance a specific approach or methodology.
- It is intended to provide researchers with supported time for developing the infrastructure needed for their work.
- It is also intended to foster applied STEM education research that is grounded in and responsive to the day-to-day work of teachers and schools, and the talents and needs of students.



# Objectives for this information session

1. Clarify / elaborate on language in the current DRK-12 solicitation about the new partnership development project type.
  - **Address questions submitted in advance.**
  - Field new questions posted via the Q&A function.
  - Questions that are not addressed today can be directed to the DRK12 program Inbox, [DRLDRK12@nsf.gov](mailto:DRLDRK12@nsf.gov)
    - Please put 'Partnership Dev' in the subject line.



**What are NSF's key objectives in DRK-12 partnership development projects?**





# Partnership development and NSF priorities

NSF's goal is not simply to fund and advance scientific research.

It also supports the translation of research and the development of partnerships needed for research translation/mobilization.

The DRK12 partnership development project type is consistent with these dual agency goals.

The partnership development project type also reflects the agency's emphasis on place-based innovation.

“Opportunities everywhere, innovation anywhere.”



# DRK-12 Program Objectives (from [NSF 23-596](#))

“The program's objectives are to:

- (1) build knowledge about how to develop preK-12 students' and teachers' STEM content knowledge, practices, and skills;
- (2) **support collaborative partnerships among STEM education researchers, STEM education practitioners and school leaders with the goals of extending relevant scientific literatures while developing more effective practice;** and
- (3) build the field of STEM education....”



# Need for Partnership Development project type

- School-researcher partnerships are the foundation of all DRK12 projects.
- Establishing and sustaining partnerships requires substantial PI time.
- This labor should be acknowledged and supported.
- COVID-19 impacted preK-12 schools' capacity to partner with researchers and to serve their communities.
- Schools and teachers need support to address new, emerging and longstanding problems of practice in STEM education.



# DRK-12 Program Overview (from NSF 23-596)

“The program invites proposals **that address immediate challenges facing preK-12 STEM education and proposals that anticipate radically different structures and functions of preK-12 teaching and learning.**

Projects funded by the program **should demonstrate a well-rounded understanding of the day-to-day work and expertise of educators in formal teaching and learning contexts, the talents and needs of the nation's diverse student population and their communities, and national, state, or district priorities.**

**Innovations can include but are not limited to** teacher preparation and professional development programs, potentially transformative teaching practices, curriculum development, development and testing of formative or summative assessment systems, instructional technologies, **models of collaborative partnerships between teachers and researchers**, and combinations of approaches that improve STEM learning and learning environments for students and their teachers, and provide the foundation to generalize to other contexts. **Proposals are encouraged to adapt ideas, concepts, theories, practices and test them across contexts and populations.”**



# DRK12 Program Strands

## Teaching Strand

Focus primarily on teacher knowledge, beliefs, and practices as the unit of analysis.

Provide a compelling argument for how the innovation or approach would be an *improvement* relative to current practice, and why and how it would lead to improved teacher practices and related outcomes for teachers and students.

Student learning outcomes can be assessed and framed as evidence of the effectiveness of innovative approaches to supporting teacher practice.

## Learning Strand

Focus primarily on student learning and other student characteristics as the unit of analysis.

Demonstrate how a proposed innovation would be an *improvement* relative to students' current opportunities to learn.

Teacher professional development and related outcomes can also be assessed and framed as part of the innovation's efforts to support student outcomes.



**Who do you envision could be the partners? I think I read that it has to be K-12 partners. How about other university partners? What if the goal is improving K-12 teacher education, and the partners are other math teacher educators?**

This opportunity is designed to connect researchers and preK-12 school partners.

“Partnership Development projects must include school partners and researchers.”

Issues relevant to teacher education can certainly be the focus of partnership development projects. If the goal is to develop partnerships among university partners, then a different funding opportunity is appropriate.



## Would it be required to include at least one K-12 school in the partnership? Or could the partnership focus on informal education?

“DRK-12 proposals that involve informal education must have clear implications for and ties to learning in formal K-12 settings.”

Proposals that focus **solely** on informal STEM education can be submitted to the Advancing Informal STEM Learning’s partnership development and planning opportunity (22-626).

Send a 1-page concept paper to [drldr12@nsf.gov](mailto:drldr12@nsf.gov);  
*Partnership Dev* in subject line.



**Is it necessary to have the primary org on this Partnership Grant be consistent with our eventual DRK12 primary organization? More generally, we seek clarity around how consistent elements of this Partnership Grant need to be with what we have in mind for a related / eventual full DRK12 submission.**

Reviewers will be concerned with the proposal's immediate plans for partnership development and the extent to which the work aligns to the DRK-12 program's goals and objectives.

Reviewers will also evaluate the extent to which the partnership development proposal appears to serve **both** schools and researchers. Proposals that engage schools only in the service of a researcher-led agenda are not responsive to the project type.

Partnership development work is emergent and a shift in focus between the initial aims and a subsequent research proposal is expectable.





# Does the partnership have to be pre-developed prior to proposal submission? Or can establishing a partnership be part of the proposal?

- “Proposals should articulate how and why they seek to intentionally ***build new, or expand existing, collaborations*** as well as a clear statement of how the activities will result in, or contribute to, DRK-12 research and development program goals.
- Proposals should provide a **clear plan and/or framework** for fostering relationship development, power sharing, respectful decision-making, and identifying future proposed projects that ensure reciprocal benefits.
- Activities within the scope of this project type include, but are not limited to, multidisciplinary workshops, stakeholder meetings, project planning and **explorations regarding the positioning and capacity of the team to work together to advance formal PreK-12 STEM teaching and learning.”**



**I understand the Partnership Development projects "are expected to lead to the development of a research and development project that is responsive to the DRK-12 solicitation" -- I'm curious how well formed the R&D project idea should be at this stage for the Partnership Development project to be competitive?**

- This depends on the nature of the partnership.
- Aims might range from initially forming a partnership to planning or conducting pilot work in the context of a more mature partnership.
- Goals can be relatively broad and emergent.
- PIs must define deliverables that align with the project-specific goals.
  - Are the deliverables ones that could support the partners as they take next steps?
  - Are the deliverables ones that the field would regard as important to advancing science and practice?



# How does NSF define successful partnership development within the context of DRK-12 projects?

“Successful proposals demonstrate how they build on fundamental research in STEM education and on previous or current applied research and development efforts. They also explain their theoretical and empirical justification (e.g., *Why is the project designed as it is?*) and outline related specific aims and methods with potential to yield new understandings of STEM teaching and learning contexts, processes, and outcomes.

**Efforts focused on facilitating the reciprocal exchange or mobilization of knowledge between the research and preK-12 formal education professional communities are strongly encouraged** (see this Dear Colleague Letter [https://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=nsf23078](https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf23078)).”

***How closely does the project align to the goals of the DRK-12 program and of this project type?***



# What criteria do reviewers typically use to evaluate DRK-12 partnership development proposals?

## Merit Review Criteria

- Intellectual Merit
- Broader Impacts
  1. Transformative potential
  2. Well-reasoned approach\*
  3. Qualified team
  4. Resources available
  5. Mechanism to Assess Success\*

\* “Proposals should provide a clear plan and/or framework for fostering relationship development, power sharing, respectful decision-making, and identifying future proposed projects that ensure reciprocal benefits.”

Alignment with DRK-12 program and project type’s goals and objectives.



# Can you please clarify a bit further the difference in expectations for the Project Description for a Partnership proposal compared to other proposals?

- **New PAPPG 24-1** <https://new.nsf.gov/policies/pappg/24-1>
  - **Chapter II Proposal Preparation Instructions**
    - Chapter II.D.2.i(i), Mentoring Plan; **Mentoring plan for Graduate students and Post-Docs**
    - Biographical Sketch; (see Chapter II.D.2.h(i)); **NO page limit**

## Required Elements (See Required Sections of a Proposal in 23-596)

- **Evaluation plan:** External evaluator is not necessarily required; evaluation can be conducted by an advisory board or developmental evaluator. Independence is essential.
- **IRB**
  - As DRK12 supports R&D, when submitting must select ‘Research’ as the project type.
  - Projects may or may not involve human subjects research; Up to PI’s institution to determine; Suggest marking “pending” on the cover sheet unless a waiver has been obtained.
- **Data management plan**
  - Complements description by explaining what kinds of information / data are being collected, who has access to it, and issues of privacy and security. Reviewers used this document to more fully understand the evaluation plan.
  - PAPPG: “A valid Data Management Plan may include only the statement that no detailed plan is needed, as long as the statement is accompanied by a clear justification.”



# I would like to learn more about what the POs have learned after this last round of reviewing proposals.

- Reviewers are learning too.
- We invite you to be a reviewer!
  - If you don't submit a proposal in this next cycle, send an email to [drlldrk12@nsf.gov](mailto:drlldrk12@nsf.gov)
    - Put *Reviewing* in the subject line.
- Reviewers looked to the stated goals and objectives in the description as anchors for the entire proposal.
  - What kind of partnership is this?
  - Are the aims, activities and frameworks aligned?
  - Is the proposed work aligned to the DRK-12 program?



## I would like to learn more about what the POs have learned after this last round of reviewing proposals.

- **Fit:** Could the project have been submitted as another project type?
  - Proposals that ***appeared*** to be researcher-led efforts did not fare well.
- **Alignment:** Do the goals and processes align to the partnership type and to the project-specific aims?
- **Power:** Do school partners have voice in conceptual development/decision-making?
  - If a mature project, be clear about how school partner(s) shaped problem identification, selection of the proposed approach and intended outcomes.
- **Mutualism:** Is it clear how the school partner will benefit?
- **Budget:** Does the budget offer equitable compensation of partners or describe how compensation is aligned to contributions/roles played?
- **Evaluation & Data management plans:** Do all partners have access to the project's data/ information? Are all partners engaged in evaluation processes?
- **Language:** e.g., Are school partners referred to as peers or as participants or research subjects?



**How do we foster partnerships with developing organizations? For example, we have been working with a relatively new non-profit, KARMA, on Navajo Nation. They are not set-up to directly intake federal funds (and be a sub-award). They are equal partners in all project involving youth and teachers in their setting so they aren't really consultants on a project either.**

While NSF increasingly calls for partnerships, there are barriers to this kind of work, both external and internal. We need to hear about these barriers.

## **Partnership Development Resources**

- The **Community for Advancing Discovery Research in Education (CADRE)** resource network. Resources made available by CADRE to the STEM education research community are available at <https://cadrek12.org/>.
- The DRK-12 program also supports the **Evidence Quality and Reach (EQR) Hub**, which works to strengthen STEM education researchers' knowledge of advanced research methods and ability to translate research knowledge to multiple and diverse stakeholder audiences. See <https://cadrek12.org/eqr-hub>.





# Are program officers available to meet with applicants when they have specific questions?

- Absolutely. We respond to concept papers until ~4-6 weeks prior to the proposal submission deadline (which is Nov. 13, 2024).
  - CADRE's NSF Proposal Toolkit may be of particular interest to those who are new to NSF <https://cadrek12.org/resources/nsf-proposal-writing-resources>.
- Prepare 1-page concept paper (patterned after the project summary format of Overview, Intellectual Merit & Broader Impacts).
- Email concept papers to the program Inbox [drldr12@nsf.gov](mailto:drldr12@nsf.gov)
  - **Include *Partnership Dev* in the subject line.**



# Objectives for this information session

1. Clarify / elaborate on language in the current DRK-12 solicitation about the new partnership development project type.
  - Address questions submitted in advance.
  - **Field new questions posted via the Q&A function.**
2. Foster communication between NSF and the field regarding partnership development in the context of STEM education research.



# Other DRK-12 Funding Opportunities

## Workshops / Conferences

Up to \$200,000 and one-year duration. No specific due date.

Invite proposals that bring together researchers and school partners to identify and/or advance critical research agendas of broader importance to preK-12 STEM education.

Convenings focused on facilitating the reciprocal exchange of knowledge and expertise between STEM researchers and preK-12 education professionals are particularly welcome.

Other areas of interest include integration of advanced and emerging technologies and supporting preK-12 STEM education's capacity to respond to emerging societal grand challenges.

Proposers are encouraged to consider multi-stage convenings (rather than a single event concentrated over several days) that allow time for collective knowledge building and diverse modes of participation.

Include a conceptual framework, draft agenda, possible participants/expertise needed, and outcomes or products.

## Syntheses

Up to \$600,000 and three-years duration. Should be submitted on the annual due date.

Can be a literature review, qualitative or mixed methods meta-synthesis and/or meta-analysis.

Proposals should demonstrate command of the literature on the question, issue, or topic. This background should be used to make a case for the amount, type, and relevance of available literature in conducting the synthesis.

Should discuss the literature search procedures, selection procedures (methods, search criteria, etc.), inclusion criteria (e.g., population, theoretical frameworks, study participants, measures, publication types, etc.) and screening methodologies.

*See the solicitation for add'l material on meta-analyses and meta-syntheses.*



Thank you for joining us today.

Thank you for all you do for STEM education  
*every day.*

