

Discovery Research PreK-12 (DRK-12)

NEW Solicitation [23-596](#)

<https://new.nsf.gov/funding/opportunities/discovery-research-prek-12-drk-12>

Submission Deadline: **November 8, 2023**



National Science Foundation
Directorate for STEM Education (EDU)

Preparing a diverse STEM workforce and a
well-informed citizenry

DRK-12 Summer Outreach 2023

Interactive Webinars

- **Thursday, July 20, 1-2PM ET**
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Additional Resources

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Important Features of New Solicitation

1. **NEW**: Added Partnership Development project type (up to \$100,000 for one year)
*Developing partnerships between researchers and **preK-12 schools** is the primary aim;* e.g., stakeholder meetings, project planning and explorations regarding the positioning and capacity of partners to work together to advance formal PreK-12 STEM teaching and learning.
2. Emphasized a programmatic commitment to research in the Teaching Strand as STEM workforce development.
3. Emphasized **dissemination** plans as one critical component of knowledge mobilization or the reciprocal exchange/translation of knowledge between fields, stakeholders, etc.
4. Moved *Assessment* from a project Strand to a project type.
5. Updated all project type descriptions.



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 - Networking
- **Workload**
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Mission & Investments

To develop a diverse and well-prepared U.S. STEM workforce and STEM-literate public by supporting excellent research and development in STEM education.

STEM Learning
and Learning
Environments



Broadening
Participation &
Institutional Capacity



STEM Professional
Workforce
Development



How the DRK-12 Program is Unique and Important

DRK-12 is the *only* NSF program whose primary purpose is to support applied research and development at the preK-12 level of *formal education* in all areas of STEM.

Invite 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.
 - *“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.”*
- Advance opportunities for *all* preK-12 students and teachers to develop their STEM talent.



DRK-12 Program Goal: Catalyze research and development that enhances *all* preK-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 preK-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

Syntheses

NEW: Partnership Development

Workshops /Conferences

Funding Level

I: \$450,000, 3 years

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

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

Syntheses: \$600,000, 3 years

Partnership Development, up to
\$100K, one year

Workshops/Conferences, up to
\$200,000, one year



Overview of this Session

1. Describe the DRK-12 Program & Project Expectations
- 2. Proposal Preparation and Review Process**
3. Reminders and Resources



NSF Policies and Procedures

Proposal and Awards Policies and Procedures Guide (PAPPG)

- Updated annually, so attend to the one that is in effect at the time of submission.
- Sets all policy for submitting proposals to NSF. Solicitation supersedes the PAPPG.

NSF 23-1 is currently in effect.

SAM.gov Unique Entity Identifier (UIN)

- All submitting organizations must have active registrations
- The General Services Administration (GSA) is currently experiencing a backlog in validation requests.

New organizations are advised to register as soon as possible.

All proposals must be submitted using Research.gov or Grants.gov



Eligibility (See Chapter 1.E of PAPPG)

- Any organization is eligible to apply. *Individuals* cannot apply for DRK-12 funding.
 - Must be registered in the SAM.gov system
- Must demonstrate acceptable accounting mechanisms in place to be recommended for funding.
 - Prospective new awardee guide https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pnag
 - Pre-award reviews <http://www.nsf.gov/bfa/dias/caar/index.jsp>
 - Federal requirements for awards <http://www.nsf.gov/bfa/dias/caar/fed.jsp>



Proposal Preparation

- See DRK-12 Solicitation: NSF 23-596
 - Section V. Proposal Preparation and Submission Instructions
- Proposals must be prepared in accordance with the PAPPG NSF 23-1.
 - See PAPPG Chapter II.D.2 for guidance on the required sections of a full research proposal submitted to NSF. Please note that the proposal preparation instructions provided in the DRK-12 program solicitation may deviate from the PAPPG instructions.



Proposal Preparation: Required Elements

1. Cover sheet
2. Project summary (one page, 3 sections)
3. Project description (15 page narrative)
 - Importance
 - Results from prior NSF support
 - Project research design (project type)
 - Mechanisms to Assess Success
 - Communication/ Dissemination
 - Expertise
 - Broader Impacts
4. References
5. Budget & Budget Justification
6. Facilities, Equipment & Other Resources
7. Senior Personnel Documents
8. Data Management Plan
9. Post-Doctoral Mentoring Plan
10. Other Supplementary Documentation



Project Summary: One-page, 3 sections

– Overview

- Strand addressed and Project type
 - *This Exploratory project in the Teaching strand seeks to ...*
 - *This two-year Synthesis project in the Learning strand aims to ...*
 - *This Partnership Development proposal in the Teaching strand would ...*
- STEM Discipline(s) and Grade or Age level(s) addressed
 - Notable participant characteristics (e.g., 1st year teachers, students with autism)
 - Project characteristics (partners, focus on rural communities, etc.)

– Intellectual Merit and Broader Impacts

- Must include separate statements on *each* of these two criteria



Mechanism to Assess Success

- A proposal must describe appropriate project-specific external review and feedback processes.
- The review might include an external review panel and/or advisory board or a third-party evaluator.
- The external critical review should be sufficiently independent and rigorous to influence the project's activities and improve the quality of its findings.
- Successful proposals will:
 - describe the expertise of the external reviewer(s);
 - explain how that expertise relates to the goals and objectives of the proposal; and,
 - specify how the PI will report and use results of the project's external, critical review process.



Supplementary Documents

- Brief letters of collaboration*
- List of personnel on the proposal
- Data Management Plan
- Post Doc Mentoring Plan

NO OTHER DOCUMENTS

**be careful not to include attachments to the letters*



Budget

- Should be consistent with level of work – you do not have to request the maximum!
- Two months salary: No more than two months of salary for senior personnel on all NSF grants unless justified
- **NOTE:** Budgets should offer fair and meaningful remuneration for teacher participants.



NOTE: Documents Required for ALL Senior Personnel

You must include all three documents below for each of the senior personnel involved in your proposal.

- Biosketch, 3-page document
- Current and Pending Support (both foreign and domestic)
- Collaborators and Other Affiliations

Use the current NSF-approved templates (see new.nsf.gov/senior-personnel-documents)

See full requirements for these documents in the Proposal and Award Policies and Procedures Guide (PAPPG) II.2.D.h.

Submissions that do not use the required templates may be returned without review.



Reasons for Returning Without Review

- Violation of formatting rules of the PAPPG (e.g., font, page length)
- Too similar to a previously submitted proposal
- Failure to address specifically intellectual merit and broader impact in the Project Summary
- Unauthorized documents/data in the appendix or supplementary document section
- No post doc plan if post docs are included in budget
- No data management plan

NSF Proposal Review Process



Proposals are reviewed in panels composed of a range of external experts (e.g., educational researchers, content experts, teachers, developers)

https://www.nsf.gov/bfa/dias/policy/merit_review/





Questions?



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