



Discovery Research preK-12 (DRK-12) Program

Division of Research on Learning
in Formal and Informal Settings

Program Solicitation: NSF 17-584
Current PAPPG applies: NSF 19-1

Important Dates

**Full Proposals Due
November 13, 2019**



Future deadlines:

- Second Wednesday in November,
Annually

Archived Webinar

- Please refer to the 2018 webinar for more details about the solicitation.**
- To view the 2018 recorded webinar on the CADRE website, [click here](#).**

Overview of the Session

- Describe NSF Policies and Procedures
- Describe the DRK-12 Program & Project Expectations
- Proposal Preparation and Review Process
- Further Information and Resources
- Final Questions

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 (NSF 19-1)
 - Sets all policy for submitting proposals to NSF. Solicitation supersedes the PAPPG.

NSF as a Funding Agency

- Field-driven funder
- DRL funds STEM education in any area of science and/or engineering supported by the agency
- Program Directors are part of the decision-making process, so can only give limited feedback to PIs

Eligibility

(Ch. 1 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>

Dear Colleague Letters

- Not new funding opportunities
- Call the field's attention to existing funding opportunities that will accept proposals in an area
- Example:
 - Dear Colleague Letter: Research to Improve STEM Teaching and Learning, and Workforce Development for Persons with Disabilities ([NSF 19-033](#))

Other DRL-based programs

- Advancing Informal STEM Learning
- EHR Core Research
- Innovative Technology Experiences for Students and Teachers
- Computer Science for All

Goal of the DRK-12 Program

Catalyze research and development of (STEM) education innovations or approaches that can serve as models for use by the nation's formal STEM education infrastructure (e.g., schools, districts, states, teachers).

DRK-12 Research and Development Strands

1. Assessment
2. Learning
3. Teaching

Types of Studies

- Exploratory
- Design and Development
 - Early Stage
 - Late Stage
- Impact
- Implementation and Improvement
- Syntheses and Conferences

DRK-12 Funded Projects

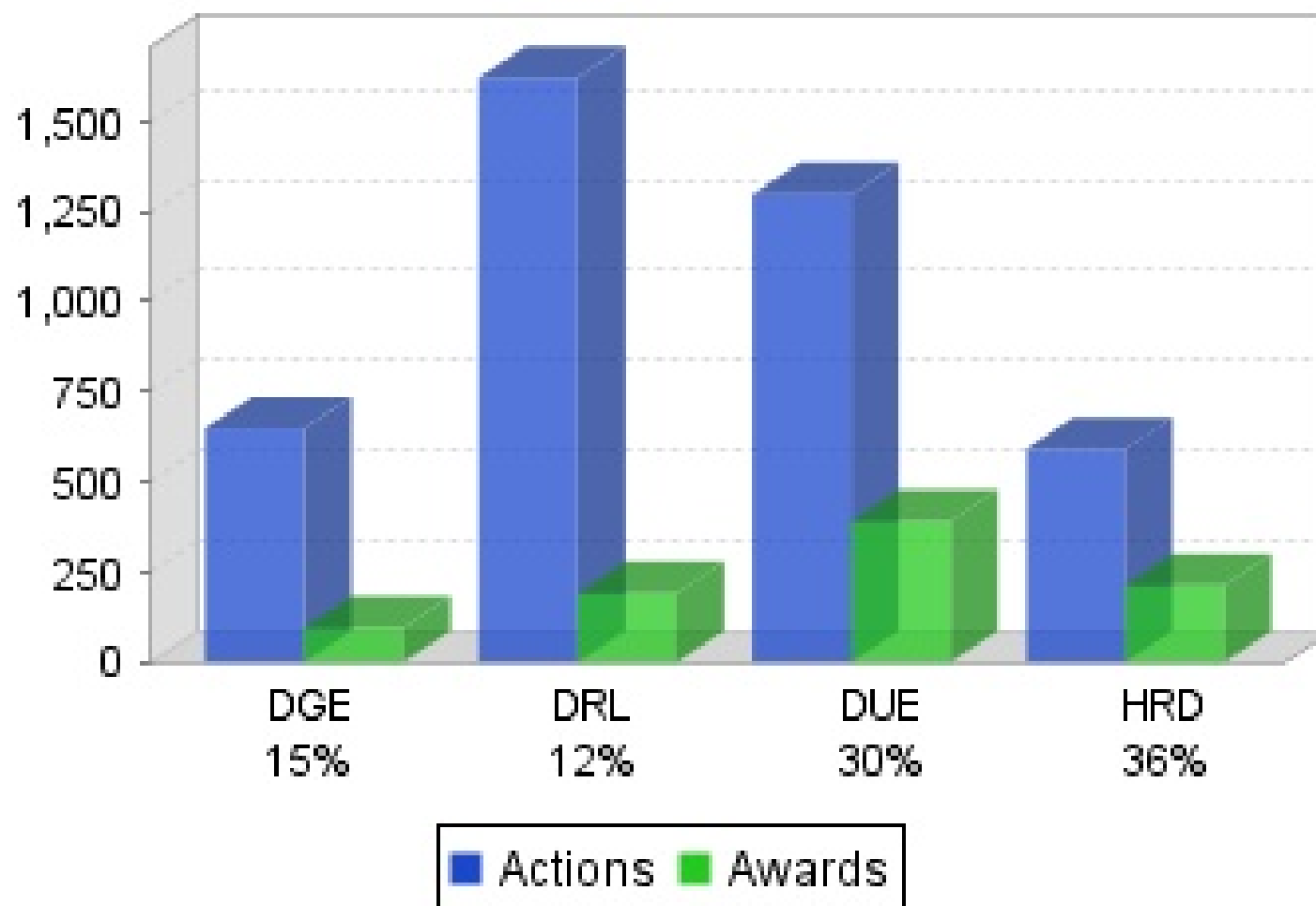
- You can find examples of DRK-12 funded projects that will give a sense of what is fundable and their outcomes at the DRK-12 webpage -
https://www.nsf.gov/funding/pgm_summary.jsp?pims_id=500047&org=DRL&from=home

Funding Levels

- Normal limits for funding requests of DRK-12 proposals are as follows:
 - Level I projects up to \$450,000 with duration up to 3 years;
 - Level II projects up to \$3,000,000 with duration up to 4 years; and
 - Level III projects up to \$5,000,000 with duration up to 5 years.
- Synthesis proposals up to \$300,000 with a duration up to 2 years
- Conference proposals up to \$100,000 with a duration up to 1 year duration

Funding Rates in EHR

Overall FY 2018 EHR Funding Rate: 21%



Questions

1. What are the priority areas for DRK-12?
2. What are the relevant and current Dear Colleague Letters?
3. How many proposals are received?
Funding rates for the program?
4. What is new in the solicitation? PAPPG?
5. What are critical features of particular study types?

Proposal Preparation

- **DRK-12 Solicitation: NSF 17-584**
(Section V. Proposal Preparation and Submission Instructions)
- Proposals must be prepared in accordance with the **PAPPG (NSF 19-1) - See Chapter 2**
- See the recorded webinar for more details about proposal preparation. [Click here.](#)

Project Summary

- **First Sentence**

- Type of Study- Exploratory, Early Stage Design and Development, Late Stage Design and Development, Impact, Implementation and Improvement, Conferences & Syntheses, Resource Network
- Main strand addressed – Assessment, Learning, Teaching

- **Second Sentence**

- STEM Discipline(s)
- Grade or Age level(s) addressed

- **Intellectual Merit and Broader Impacts**

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

Mechanisms to Assess Success

A proposal must describe appropriate project-specific external review and feedback processes.

- The review might include an external review panel 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 with academic positions on all NSF grants unless justified
- See the recorded webinar and PAPPG for more details about budget. [Click here.](#)

Reasons for Return Without Review

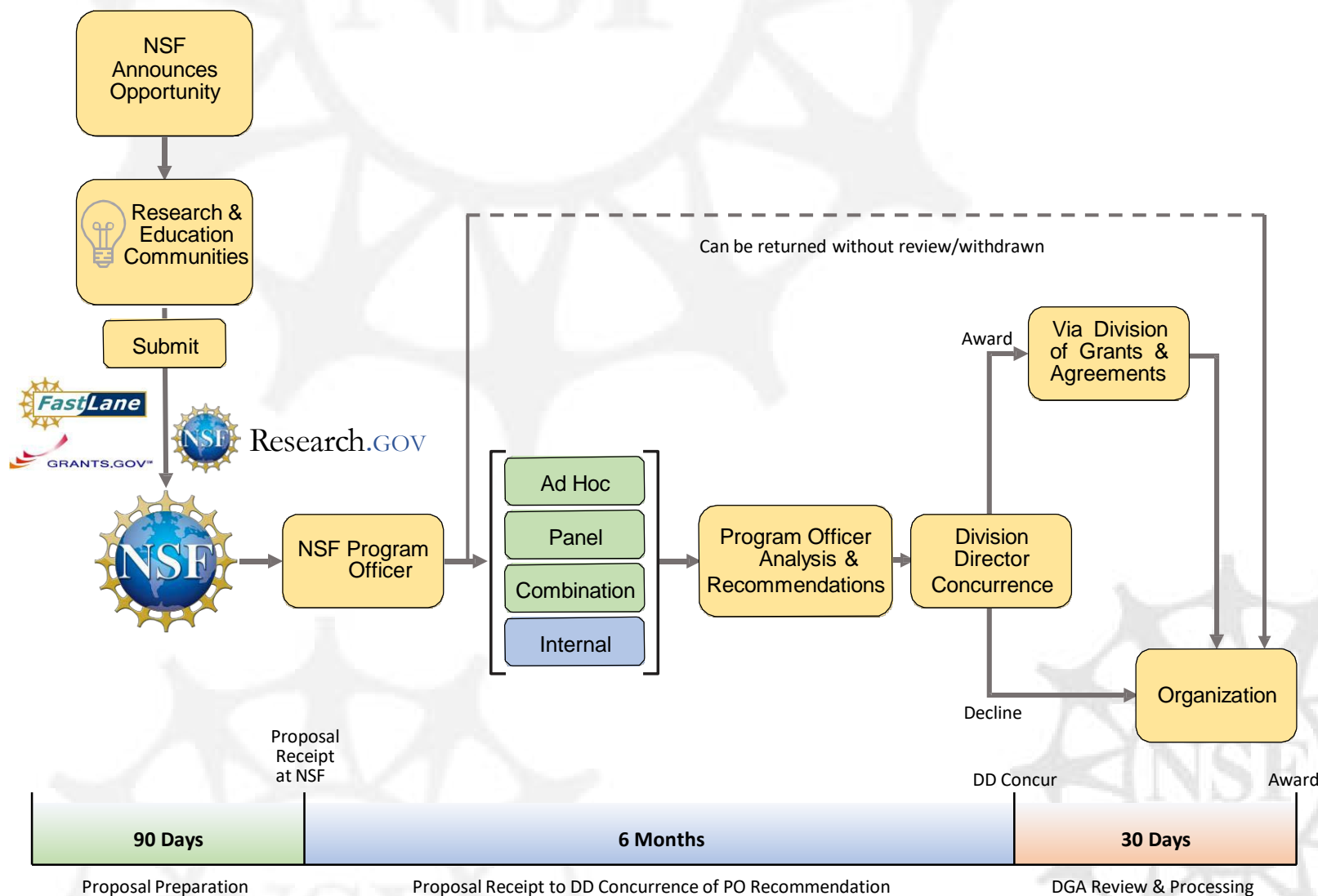
- Violation of formatting rules of the PAPPG 19-1 (e.g. font, page length, etc)
- Failure to address specifically intellectual merit and broader impact in the Project Summary and Project Description
- Unauthorized documents/data in the appendix or supplementary document section
- No post doc plan if post docs are included in budget
- No data management plan

Proposal Review Process

- Proposals are reviewed in panels composed of a range of external experts (e.g. educational researchers, content experts, teachers, developers)
- See the recorded webinar for more details about the review process.

[Click here.](#)

Exhibit III-1: NSF Proposal & Award Process & Timeline



Merit Review Elements

The following elements should be considered in the review for both criteria:

1. What is the potential for the proposed activity to:
 - Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
 - Benefit society or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the individual, team, or organization to conduct the proposed activities?
5. Are there adequate resources available to the PI (either at the home organization or through collaborations) to carry out the proposed activities?

Types of Broader Impacts

- Full participation of women, persons with disabilities, and underrepresented minorities in STEM
- Improved STEM education and educator development at any level
- Increased public scientific literacy and public engagement with science and technology
- Improved well-being of individuals in society
- Development of a diverse, globally competitive STEM workforce
- Increased partnerships between academia, industry, and others
- Improved national security
- Increased economic competitiveness of the United States
- Enhanced infrastructure for research and education
- ...

<https://www.nsf.gov/od/oia/special/broaderimpacts/>

See also the National Alliance for Broader Impacts

<https://broaderimpacts.net/>

Questions

1. Is a project evaluation required?
2. What is the most common reason a proposal is funded/not funded?
3. What does broader impacts mean beyond the classroom/school?
4. What advice do you have for early career researchers?

For Further Information

- Call 703-292-8620
- Email: DRLDRK12@nsf.gov
- Contact a DRK-12 Program Director

This webinar was hosted by **CADRE**, the resource network for the DRK-12 Program. Webinar slides and recording will be posted to cadrek12.org

Resources of Interest:

- NSF Proposal Toolkit: <http://cadrek12.org/resources/nsf-proposal-writing-resources>
- Prior DRK-12 funded work: <http://cadrek12.org/projects>
- Recent DRK-12 publications: <http://cadrek12.org/reading-list>
- Spotlights on STEM topics: <http://cadrek12.org/spotlights-stem-topics>

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Questions? Email us at cadre@edc.org.

Good Luck!