

# Robert Noyce Teacher Scholarship Program, [NSF 17-541](#)

## *Focus: Track 4: Noyce Research Track*



Kathleen Bergin and Jennifer Lewis

[kbergin@nsf.gov](mailto:kbergin@nsf.gov) [jenlewis@nsf.gov](mailto:jenlewis@nsf.gov)

Division of Undergraduate Education

### Track 1: S&S

Scholarships & Stipends  
Undergraduate STEM majors and/or  
STEM professionals

### Track 2: TF

NSF Teaching Fellowships  
STEM professionals

Robert Noyce  
Teacher Scholarship  
Program  
Solicitation NSF 17-541

### Track 3 (MTF)

NSF Master Teaching Fellowships  
Exemplary, experienced STEM  
teachers

### Track 4: Noyce Research

Research related to STEM teacher  
**effectiveness, persistence, and  
retention** in high-need LEAs

\*Capacity Building projects, which may lead to the development of full proposals for Tracks 1, 2, or 3, are also supported.



No Previously Funded  
Noyce Projects Required

Researchers + STEM  
faculty + STEM  
education faculty

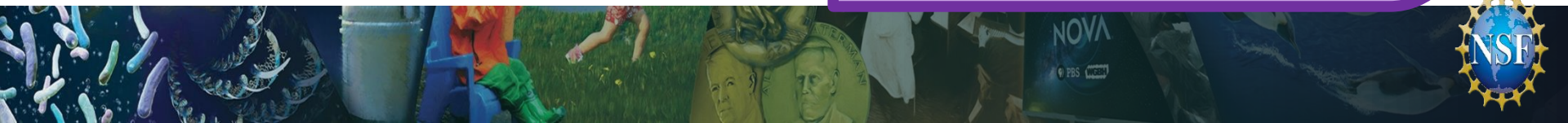
Up to \$800K  
for up to 5 years

Noyce Projects  
Substantively Involved

Researchers +  
Noyce projects +  
STEM faculty +  
STEM education  
faculty

Up to \$800K + \$100K  
for each Noyce project  
not to exceed \$2.3M  
for up to 5 years

**Track 4: Noyce Research**  
Research related to STEM teacher  
**effectiveness, persistence, and**  
**retention** in high-need LEAs



# Important Notions to Attend to: FOCUS

**FOCUS MUST BE ON:** STEM Teacher **effectiveness**, **persistence**, or **retention** in high-need school districts (HNSD).

Examples of possible research studies:

- Identify teacher characteristics or programmatic features predictive of highly effective teachers who persist in teaching in HNSDs
- Investigate persistence of Noyce Scholars or Fellows as teachers in HNSDs beyond their service requirement
- Describe characteristics of HNSDs that result in retention of STEM teachers

*Note: These are just examples and do not span the scope of research studies possible to examine STEM teacher effectiveness, persistence or retention in HNSDs.*



FOCUS MUST BE ON: STEM Teacher **effectiveness, persistence, or retention** in high-need school districts (HNSD).

Research studies may use a variety of approaches, which may include but are not limited to research synthesis, case studies, design-based implementation research, quasi-experimental designs, or experimental investigations in order to build an evidence base to contribute to STEM education literature and inform policy.



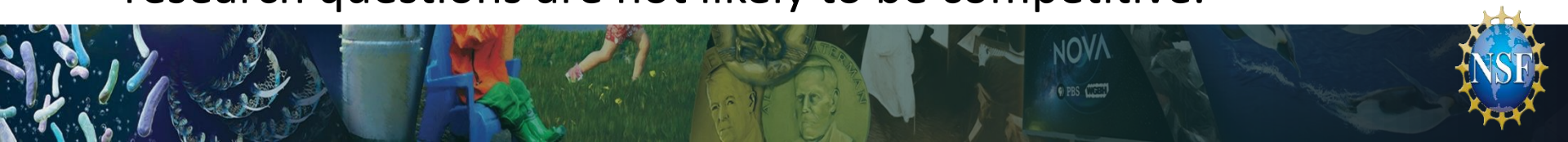


# Common Track 4 Weaknesses

Studies that involve examination of only a single institution's teacher preparation program are discouraged unless the proposal provides a compelling argument that the results can be generalized to the larger community.

Studies that fail to address effectiveness, persistence or retention in HNSDs are not within the scope of the solicitation.

Proposals that do not clearly articulate the research questions, their relationship to the data to be collected, the methods of analysis, and the project's ability to authoritatively answer the research questions are not likely to be competitive.



# Eligibility for a Noyce Grant

Track 4 proposals may be submitted by:

- One or more universities, four-year colleges, and/or two-year colleges; OR
- U.S. nonprofit entities that have established consortia among such institutions of higher education (IHE); OR
- Professional societies and similar organizations that are directly associated with educational or research activities.

No restrictions on the number of proposals (or tracks)

per organization OR

per PI or Co-PI





# Critical Resources

- Solicitation 17-541 (required)
- Proposal and Award Policies and Procedures Guide (PAPPG), NSF 20-1 (required)
- Common Guidelines for Education Research and Development (NSF 13-126 and NSF 19-022)
- [nsfnoyce.org](https://www.nsfnoyce.org)



# Proposal Due Dates for NSF 17-541

- Tuesday, August 25, 2020 for FY21 funds
- Last Tuesday of August, annually thereafter

*Note: No new Noyce solicitation was released in 2020.*



# Project Summary (1 page)

Overview: The first sentence **must** -

- indicate the specific Track of the proposal (e.g., S&S); and
- name all institutions, including high-need local educational agencies and non-profit organizations as appropriate, that are involved in the proposal.

**Intellectual Merit** (*How important is this work & how well designed is the project?*)

**Broader Impacts** (*What is the benefit of this work to STEM Education, to society?*)



# Poll – True or False Quiz

Track 4 proposals must:

1. Involve Noyce Scholars, Fellows, or Projects,
2. Include both qualitative and quantitative methods,
3. Include letters of collaboration committing to provide access to appropriate data,
4. Identify the methods to be used to answer the research questions and describe the sample to be studied.



# Q & A # 1

*15 minutes*



# Intellectual Merit & Broader Impacts (Required)

- **Intellectual Merit:** The Intellectual Merit criterion encompasses the potential to advance knowledge; and
- **Broader Impacts:** The Broader Impacts criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.



# Elements of Both Merit Review 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?



# Poll – One Question Quiz

Which of the following should be included in the proposal?  
(select all that apply)

- Project Summary with Intellectual Merit & Broader Impacts Labeled
- Project Description with Intellectual Merit & Broader Impacts Labeled
- 15-Page Project Description
- Dissemination Plan
- Prior NSF Support (if applicable)
- Research Question(s)
- Research Design, Data Sources, Methodology
- Relevant Research Literature
- Objective External Feedback Mechanism





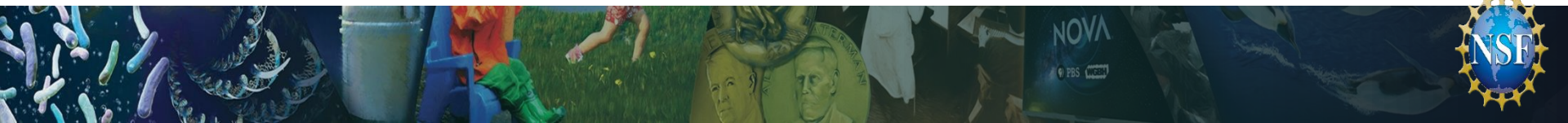
# General Tips for Success

1. Be aware of other projects and advances in the field.
2. Cite the literature.
3. Include details and **all** requirements per solicitation.
4. Discuss prior (including Noyce) NSF results.
5. Include plan for objective external feedback (evaluator or advisory board) with timelines and benchmarks.
6. Propose a cost effective but high impact project.
7. Put yourself in the reviewers' places.
8. If resubmitting previously declined proposal, consider reviewers' feedback. Substantive changes to a declined proposal are required.
9. Have someone else read the proposal.
10. Call or email cognizant Noyce Program Directors.



# Other EHR Programs of Possible Interest

- Improving Undergraduate STEM Education (IUSE: EHR NSF 19-601)
- EHR Core Research (NSF 19-508)



# Cognizant Noyce PDs

- Sandra Richardson (*Program Lead*) [srichard@nsf.gov](mailto:srichard@nsf.gov)
- **Kathleen Bergin** (*Program Lead*) [kbergin@nsf.gov](mailto:kbergin@nsf.gov)
- Karen Keene (*Program co-Lead*) [kkeene@nsf.gov](mailto:kkeene@nsf.gov)
- **Jennifer Lewis** [jenlewis@nsf.gov](mailto:jenlewis@nsf.gov)
- Andrea Nixon [anixon@nsf.gov](mailto:anixon@nsf.gov)
- Michelle M. Camacho [mcamacho@nsf.gov](mailto:mcamacho@nsf.gov)
- Mike Ferrara [mferrara@nsf.gov](mailto:mferrara@nsf.gov)

If you are interested in serving as program reviewer and not submitting a proposal in 2020, contact a cognizant PD in August.



# Q & A # 3

*15 minutes*

