



NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230

NSF 17-149

Dear Colleague Letter: Discovery Research PreK-12: Advancing STEM+Computing

September 28, 2017

Dear Colleague:

The *Discovery Research PreK-12* program (DRK-12), in its effort to significantly enhance the learning and teaching of science, technology, engineering, mathematics (STEM) and computer science by preK-12 students and teachers, is encouraging investigators through this Dear Colleague Letter (DCL) to submit proposals studying the integration of computing and/or computational thinking within disciplinary STEM learning and teaching in formal STEM education. **Proposals are due November 14, 2017 (DRK-12 Solicitation [NSF 17-584](#)).**

As computing has become integral to the practice of the STEM disciplines, investigators may seek to address such emerging challenges in computational learning and teaching in early childhood education through high school (preK-12). Investigators may seek to address the immediate challenges facing preK-12 STEM integrated with computing, as well as challenges that anticipate radically different structures and functions of preK-12 teaching and learning. It is anticipated that projects should bring together an intellectually diverse team of educators, scientists, mathematicians, or engineers to frame challenging research questions and propose novel and innovative solutions for problems of research and practice.

The DRK-12 program has three major research and development strands: (1) Assessment; (2) Learning; and (3) Teaching. The program recognizes the synergy among the three strands and that there is some overlap and interdependence among them; however, proposals should identify a clear focus of the proposed research (i.e., assessment, learning, or teaching) consistent with the proposal's main objectives and research questions. The program supports six types of projects: (1) Exploratory, (2) Design and Development, (3) Impact, (4) Implementation and Improvement, (5) Syntheses, and (6) Conferences. All six types of projects apply to each of the three DRK-12 program strands.

Through this DCL, researchers may also submit EARly-concept Grants for Exploratory Research (EAGER) proposals. EAGER proposals are to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches. An EAGER proposal submitted in response to this DCL would propose exploratory research studying the integration of

STEM and computing. EAGER proposals must conform to the guidelines as specified in Chapter II.E.2 of the NSF Proposal & Award Policies & Procedures Guide (*PAPPG*), including the requirement to discuss the proposal with a Program Officer prior to submission:

https://www.nsf.gov/publications/pub_summ.jsp?ods_key=pappg.

Researchers interested in submitting proposals to the DRK-12 Solicitation (17-584) to study the integration of STEM + Computing in response to this DCL, must submit by the **DRK-12 proposal deadline: November 14, 2017**.

Questions regarding proposals in response to this DCL, please contact: **Dr. Arlene de Strulle** (adestrul@nsf.gov).