



National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

NSF 14-122

Dear Colleague Letter: Support for Including Science Educators in Polar Research

September 26, 2014

Dear Colleague:

The Division of Polar Programs (PLR) and the Division of Undergraduate Education (DUE) encourage proposals that will leverage the extensive National Science Foundation (NSF) investment in polar sciences and polar infrastructure for the benefit of science education in the U.S. and for the development of the next generation of polar scientists. In order to promote polar science educational opportunities, PLR and DUE will accept and review proposals for the development and management of a program(s) that will facilitate the participation of pre-service and in-service middle and high school teachers as well as faculty from Primarily Undergraduate Institutions (PUI), including community colleges and Minority Serving Institutions (MSI), in research projects focused on the Arctic and Antarctic. Proposals in response to this Dear Colleague Letter must be submitted to the Improving Undergraduate Science Education (IUSE) deadline of January 13th, 2015.

The integration of research and education is essential to NSF's mission. In addition, NSF seeks to broaden participation in science and to make the results of research projects widely accessible to students and the public. PLR addresses these objectives by supporting the participation of students and educators in polar research projects. NSF priorities for undergraduate-focused education projects are informed by a new framework developed as part of the National Science Foundation (NSF) *Improving Undergraduate STEM Education* (IUSE) initiative, which is a comprehensive, Foundation-wide effort to accelerate the quality and effectiveness of the education of undergraduates in all of the STEM fields. The *IUSE Framework* promotes new and exciting approaches to using research on STEM learning and education to address challenges across undergraduate STEM education, as well as within specific disciplines. The framework draws upon a knowledge base accumulated from decades of research, development, and best practices across the nation in STEM undergraduate education. NSF expects that investments within the IUSE portfolio will integrate theories and findings from education research with attention to the needs and directions of frontier science and engineering research. Priorities of this framework are described in more detail in the IUSE solicitation ([NSF 14-588](#)).

While participation of educators and students in both Arctic and Antarctic research projects is encouraged, it requires a substantial level of planning and logistical support. The logistical support required is unique to polar science and requires the development of discipline-specific best practices to ensure success. In order to organize the participation of educators in polar research programs and to provide for their preparation and safety, PLR and EHR will consider proposals that provide for inclusion of educators in polar research. Proposals that make use of innovative technology for remote access and inclusion of larger groups of educators are encouraged. Proposals that include participation of individuals in various research projects are also encouraged and may include the selection of participants, matching of participants with polar research projects and researchers, preparation of participants for field experiences, logistical support for participants' travel, and organization of subsequent outreach, education and evaluation efforts. Activities should reflect an understanding of best practices for educator

professional development and include development and maintenance of a variety of web-based products for dissemination of program information and educational products to the broadest possible audience.

Proposals in response to this letter must be submitted to the Improving Undergraduate Science Education (IUSE) solicitation for the January 13, 2015 deadline.

Proposals submitted in response to this letter must be identified by starting the proposal title with the term: "IUSE-Polar ([NSF 14-122](#)).

Those considering submitting a proposal in response to this opportunity are strongly encouraged to contact: [Lisa Rom](#); 703-292-7709, the cognizant program officer who can answer questions and provide further guidance.

Sincerely,

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Directorate for Education and Human Resources

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