



National Science Foundation
4201 Wilson Boulevard
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Dear Colleague Letter on Climate Change Education

Dear Colleague:

The Education and Human Resources Directorate (EHR) is augmenting funding to support emerging areas of climate change education, with a focus on development of the climate science professional workforce, public understanding and engagement on climate change issues, and informed decision-making associated with adaptation to and mitigation of climate change impacts. These emerging priorities lie at the intersection of social/behavioral/economic, and global Earth system science, as well as educational, research.

Climate Change Education seeks to ensure that individuals and communities understand the essential principles of Earth's climate system and the impacts of climate change, and are able to make informed and responsible decisions with regard to actions that may affect climate. (Climate Literacy: The Essential Principles of Climate Science, March 2009, available at <http://www.climatescience.gov/>). NSF supports substantial investment in basic research that informs what we know about Earth's changing climate and can guide decisions about how best to respond to change. (Solving the Puzzle: Researching the Impacts of Climate Change Around the World, NSF report, 2009, available at <http://www.nsf.gov/news/nsf09202/index.jsp>). It is critical that climate scientists play an active role in the dissemination of their findings and that students at all levels, and in formal and informal learning settings, and the general public have access to data in ways that facilitate climate literacy and informed decision making. What are the most effective ways to communicate to students and the general public about how the Earth is changing in response to human activities? How can they have meaningful access to data collected at large observatory networks, for example, the Long Term Ecological Research (LTER) networks, the National Ecological Network (NEON,) and the data bases to be coordinated under the Sustaining Arctic Observing Networks (SAON) initiative, see <http://www.arcticobserving.org/>)? How can local high impact activities be scaled up and serve as national models? What are effective climate change literacy professional development opportunities for policy decision makers at all levels? How do we assess changes in individual's understanding of the Earth's climate system and the decisions they make about their actions?

Priority will be given to projects that address preparing innovators for the workforce, and fundamental topics in Climate Change Education (CCE) including: strategies for scaling up and widely disseminating effective curricula and instructional resources, assessment of student learning of complex climate issues as it translates into action, addressing local and national STEM educational standards and policy for teaching CCE, and professional development in climate change literacy for policy decision makers at all levels (local to national). We are especially interested in projects that would lead to the adoption of models that support synergistic activities among large-scale NSF research programs that support the integration of research into effective and high impact education and outreach efforts. Projects should fully incorporate current understandings of how people learn. Pilot efforts intended to track the longer-term impact of NSF investments in climate change education are encouraged.

We seek to foster transformative advances within and among programmatic areas that integrate concepts and observations across diverse fields of scholarship relevant to Climate Change Education. We are particularly interested in multi-disciplinary proposals that address the aforementioned topics and result in a variety of partnerships, including those among K-12 education, higher education, the private sector, and related non-profit organizations, in both formal and informal settings, as well as climate-related policymakers. The most competitive proposals will integrate questions and approaches across disciplines. We expect to support individual investigators as well as multidisciplinary teams of STEM researchers and educators in a range of activities, including those local, regional, and/or global in scope.

This is not a special competition or new program. Relevant proposals submitted to one of the following programs within EHR will be supported:

- In the Division of Graduate Education – NSF Graduate STEM Fellows in K-12 (GK-12); and Integrative Graduate

Education and Traineeship (IGERT)

- In the Division of Undergraduate Education - Course, Curriculum, and Laboratory Improvement (CCLI); Advanced Technological Education (ATE); and National STEM Distributed Learning (NSDL)
- In the Division of Research on Learning in Formal and Informal Settings - Discovery Research K-12 (DRK-12); Research and Evaluation on Education in Science and Engineering (REESE); and Informal Science Education (ISE)
- In the Division of Human Resource Development - Centers of Research Excellence in Science and Technology (CREST) and Tribal Colleges and Universities Program (TCUP)

Investigators who have appropriate proposals already submitted to one of the programs above that are still under review for FY09 funding should request that they be identified now as CCE, by notifying the cognizant program officer for the program by July 24, 2009. Some of the programs noted above also accept submissions outside their ordinary timelines, especially for support of meetings or other activities designed to build communities of scholars around common interests. Before submitting a proposal outside the regular program cycle, proposers should consult with a program officer. Titles of new proposals that respond to this call now or in subsequent submissions to the regular cycles of the programs above should be prefaced with "CCE:" For full proposals submitted via FastLane, standard Grant Proposal Guidelines apply.

This Dear Colleague Letter is in effect for FY 2009. It is expected that this letter will be replaced by a multi-directorate formal solicitation in FY 2010. We anticipate awarding at least \$10 million for CCE in FY 2009. Investigators are strongly encouraged to contact the EHR Climate Change Education Working Group (EHR-CCE@nsf.gov) to determine if their proposed ideas respond to the CCE goals, and to discuss relevant topics of interest. We look forward to discussing your ideas.

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