

**NSF DATA-INTENSIVE RESEARCH TO IMPROVE TEACHING AND LEARNING  
AN IDEAS LAB TO FOSTER TRANSFORMATIVE APPROACHES TO TEACHING AND  
LEARNING**

**Deadline for Preliminary Proposals (to participate in the Ideas Lab): August 19, 2013**

**Deadline for Full Proposals (preliminary proposal and participation in Ideas Lab not required):  
December 9, 2013**

**Eligible Disciplines: STEM Disciplines, Computer Science, Behavioral Science, Statistics,  
Database Research, Education Research**

**Award Amount: Costs of attending the Ideas Lab will be covered for participants accepted to the  
Lab; Up to 10 full proposals anticipated to be funded in FY 14, the total funding amount  
anticipated by NSF for all awards is \$5,000,000**

The goal of this activity is to foster novel, transformative, multidisciplinary approaches that address the use of large data sets to create actionable knowledge for improving STEM teaching and learning environments (formal and informal) in the medium term, and to revolutionize learning in the longer term. These approaches will involve the work of learning scientists, STEM disciplinary experts, computer scientists, statisticians, database experts and educational researchers who design and study learning environments. Among the potential benefits of integrating approaches from these disciplines are improving student learning and engagement, optimizing personalized instruction, and supporting rapid decision making to help educators respond more effectively to the learning needs of individuals and groups of learners in multiple settings. These approaches may be risky but should have the potential to rapidly advance the field. The scope of this activity does not include infrastructure development focused on database design and development for education domains. The new approaches envisioned in this solicitation will require the generation and use of data that range from micro-level data on individual learners, to data from online learning sources (such as massively open online courses), to meso-level data from the classroom that provide information to students and teachers about how learning is progressing, to macro-level data such as school, district, state, and national data, including data from federal science and policy agencies.

Participants in the Ideas Lab, selected through an open application process, will engage in an intensive five-day residential workshop (October 7-11, 2013), the development of multidisciplinary collaborative proposals through a real-time and iterative review process, and, for the participant teams invited to submit full proposals, the subsequent submission of full proposals. Between 20 and 30 participants will be selected for the Ideas Lab on the basis of the interests, expertise, and other characteristics described in their submitted preliminary proposals. Within seven to fourteen days following the workshop, NSF will determine which participant teams will be invited to submit full proposals.

**Application:**

There are two paths towards final submission of proposals to this activity - through the Ideas Lab or through direct submission of a full proposal. Applicants who do not participate in the Ideas Lab or who do participate but were not invited to submit a full proposal may submit full proposals by the December 9, 2013 deadline. Participation in the Ideas Lab is not required to submit a full proposal.

Preliminary proposals for participation in the Ideas Lab must be submitted through FastLane. They may not include co-PIs or collaborators. Applications must consist of a 2-page Project Description, Biosketch, and Current and Pending Support information. All other elements of a "full proposal" are waived (Project Summary, References Cited, Budget, Budget Justification, Facilities, Equipment and Other Resources). No appendices or supplementary documents may be submitted.

Participants selected to take part in the Ideas Lab will be notified by September 6, 2013. Submission of the preliminary proposal will be considered an indication of availability to attend and participate through the full course of the five-day residential workshop, location TBD. Travel and subsistence costs to attend the workshop will be reimbursed.

Full proposals may be submitted via either [grants.gov](http://grants.gov) or FastLane, according to the usual NSF procedures.

**Additional Information:**

More information about this funding opportunity is available at:  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=504925&WT.mc\\_id=USNSF\\_39&WT.mc\\_ev=click](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504925&WT.mc_id=USNSF_39&WT.mc_ev=click)

Questions regarding this announcement or proposal submission can be directed to Jen Corby (617-495-1590, [jcorby@fas.harvard.edu](mailto:jcorby@fas.harvard.edu)) or Susan Gomes (496-9448, [susan\\_gomes@harvard.edu](mailto:susan_gomes@harvard.edu)).

**Deadlines:**

<b>OSP Deadline for Preliminary Proposals:</b>	<b>August 12, 2013</b>
<b>NSF Deadline for Preliminary Proposals (to participate in the Ideas Lab):</b>	<b>August 19, 2013</b>
<b>OSP Deadline for Full Proposals:</b>	<b>December 2, 2013</b>
<b>NSF Deadline for Full Proposals (preliminary proposal and participation in Ideas Lab is not required for submission of full proposal):</b>	<b>December 9, 2013</b>