



NATIONAL SCIENCE FOUNDATION  
4201 WILSON BOULEVARD  
ARLINGTON, VIRGINIA 22230

NSF 15-062

## Dear Colleague Letter: Indicators for Monitoring Progress Toward Successful K-12 STEM Education

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This Dear Colleague Letter is to announce that the National Science Foundation's Directorate for Education and Human Resources is interested in research and development activities around the 14 Indicators as described in 2013 in the National Research Council report, *Monitoring Progress Toward Successful K-12 Education: A Nation Advancing?* The report calls for a national indicator system that could be used by both policymakers and practitioners to improve STEM education. The report lists 14 Indicators that, if measured regularly, could catalyze such improvement. The indicators can be found at: [http://www.nap.edu/catalog.php?record\\_id=13509](http://www.nap.edu/catalog.php?record_id=13509). While there are measures of some of these 14 indicators, the valid and reliable measurement of all these indicators is insufficiently developed to monitor the progress of K-12 STEM education in the US.

The purpose of this DCL is to encourage proposals to be submitted to the Promoting Research Innovations in Methodologies and Evaluation (PRIME) program ([NSF 15-540](#)) to conduct exploratory work in its early stages on untested but potentially transformative research ideas or approaches necessary to move forward to design and develop measures of one or more of these 14 indicators for use in monitoring and improving the STEM education system.

Since measures and the associated data for many of these indicators are not yet available, it is anticipated that many of the submitted Indicators-related projects may consist of:

1. Research that would lead to the development of consensus among STEM educators about the nature and operational definitions of one or more of these indicators;
2. A review and synthesis of the current state of the evidence base as they might map the development of measures of these indicators; and/or
3. Research and development to create and validate measures of one or more of these indicators, with an emphasis on the measures with the potential to support inferences at a national scale.

All submissions should begin with INDICATORS in the proposal title. Questions should be directed to one of the following program officers:

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