

# University of Idaho

### Micron STEM Education Research Initiative

Year One Overview





## Background

- The United States is not preparing a sufficient number of students, teachers, and practitioners in the areas of Science, Technology, Engineering, and Mathematics (STEM).
- The reason for declining interest in STEM careers and the relatively low achievement in STEM subjects is attributed to many sources: limited STEM focus in teacher preparation, lack of distinct STEM pedagogy, inadequate facilities, peer pressure, parental attitudes, etc.
- Research to date has not discovered complex causes for the decline in STEM achievement in Idaho.





### Micron STEM Education Initiative

- The research initiative will reveal the complex factors that shape STEM attitudes, interest, and performance in Idaho, and coordinate the development of innovations/initiatives to support STEM student achievement.
- The novelty of the project is that it brings social science researchers, scientists, educational practitioners, community members, and policy makers together as a team, exploring the issues and constructing solutions to the discovered problems.
- The Micron STEM Education Research Initiative is a first-of-its-kind in Idaho and in the nation.

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### Project Objective

- The Micron STEM Education Research Initiative will collect and analyze data on the needs, attitudes and contextual variables associated with student STEM attitudes, interest, and performance in Idaho.
- The goal is to identify specific supports and barriers to STEM interest and competency in the selected communities and statewide.
- Outcomes will be to enhance policy discussion and practices aimed toward strengthening STEM education, increasing student participation and achievement in STEM in Idaho.
- Findings will inform dialogue, innovative policies, build best practices that are oriented in new ways for addressing STEM achievement among Idaho students.

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#### Micron STEM Education Initiative Timeline 2010-2015

#### Year One: Fall 2010-Spring 2011

Build partnerships with school districts and communities. Conduct focus groups with teachers, parents and community members. Interview administrators.

**Completed Summer 2011** 

Year Two: Fall 2011-Spring 2012

Statewide, cross-sectional telephone survey of Idaho households. Oversample of selected communities.

**Completed April 2012** 

Year Three: Fall 2012-Spring 2013

Mail survey of teachers, and administrators. Self administered (paper and pencil) survey of students and parents.

Begin Fall 2012

#### Year Four: Fall 2013-Spring 2014

Support and assist with innovations and initiatives for change, which are developed based on data collected in years one through three.

Begin Fall 2013

Year Five: Fall 2014-Spring 2015

Survey students and parents in selected grades for longitudinal comparisons. Complete project and report to partners.

Begin Fall 2014

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