

School of Education

Response to STEM Discipline Challenges

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Sample of Programs

- UC Cal Teach
- Center for Science & the Schools Penn State
- Collaborative Evaluation Communities in Urban Schools Project U of Kansas
- Math & Science Initiatives U of Florida
- Instructional Leadership in Math and Science Ed U of Oregon
- The Internet Learning Forum Indiana University
- Late Deciders U of Virginia
- Lehrer-Schauble Initiative Vanderbilt U
- Math and Science Scholars Texas A&M
- UTeach University of Texas
- Math & Science Recruitment U of Maryland

Samples

- PRISM at Emory
- Indiana University
- Iowa State University
- Johns Hopkins Neuro - Education Initiative
- Michigan State University
- U of Minnesota
- NYU Wallerstein Collaborative
- Northwestern Bguile
- Purdue
- Stanford
- U. of Colorado Boulder
- U of Illinois I-LLINI Partnerships
- U of Missouri

Goals of Programs

- More new teachers
- In service education
- Curriculum development
- Mid career changers
- Industry/school/university partnerships
- International comparisons of children's learning
- Retention of teachers
- Recruitment in high schools and community colleges
- Research experiences for teachers, undergraduates
- Knowledge mapping

Important Schools of Ed Foci

- **Content pedagogy**
- **Inquiry science**
- **Links with language**
- **Focus on student work**
- **Curriculum Development**
- **In-service**
- **Linking NSF broader impact work**
- **Technology and STEM**
- **Links with industry**
- **Parent involvement**
- **Critical transitions**
- **Induction**
- **Teacher leadership**
- **Accessibility for underrepresented groups**



Challenges

- Continuing calls to reform mathematics, science, and teacher education
- Minimal research to support the reforms
- Psychological research often separate from disciplinary faculty and teacher education faculty
- Laboratory studies need scaling



Psychological Science in SOEs

- Educational psychology research on learning
- Developmental psychology
- Language and Literacy
- Meta cognition
- Motivation
- Individual differences