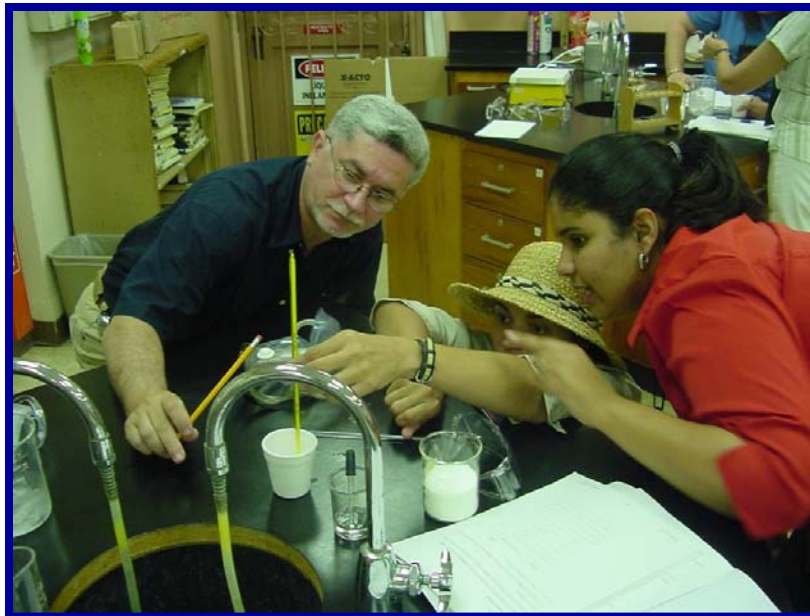
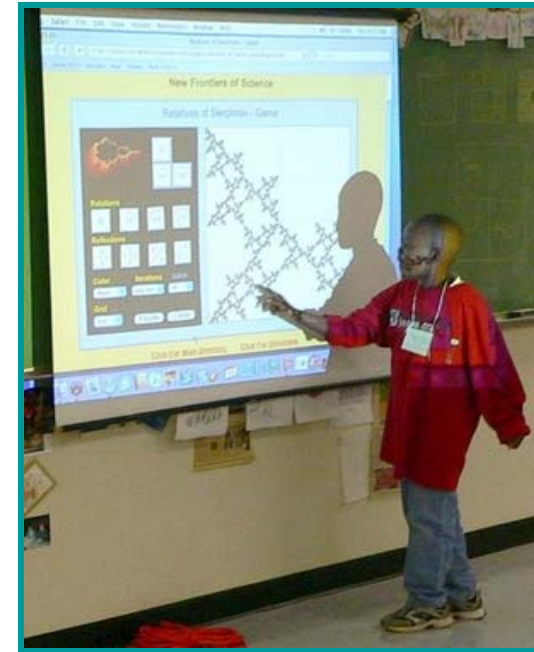


# Designing High Quality Professional Development for Teachers of Mathematics and Science

May 24-25, 2010  
Washington, D.C.

# Math and Science Partnership (MSP) Program

*A Research and  
Development Effort in K-16  
Teaching and Learning*



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**National Science Foundation**

**May 2010**

# NSF MSP Program

- *Ensure that all students have access to, are prepared for and are encouraged to participate and succeed in challenging and advanced mathematics and science courses;*

# NSF MSP Program

- *Enhance the quality, quantity and diversity of the K-12 mathematics and science teacher workforce; and*
- *Develop evidence-based outcomes that contribute to our understanding of how students effectively learn mathematics and science.*

# What distinguishes NSF's MSP Program?

- Substantial intellectual engagement of **mathematicians, scientists and engineers** from higher education in improving K-12 student outcomes in mathematics and the sciences
- Depth and quality of creative, strategic actions that extend **beyond commonplace approaches**

# What distinguishes NSF's MSP Program?

- Breadth and depth of **Partnerships** – Partnerships between organizations, rather than among individuals only
- Organizational/**institutional change** driven by Partnerships
- Degree to which MSP work is integrated with **evidence**; degree to which the work of the Partnerships includes scholars who conduct exemplary evaluation and research

# Scope of Partnership Projects

- **Roughly 100 partnerships funded to date**
- **Over 900 K-12 school districts**
- **~5 million students**
- **~147,000 teachers of K-12 mathematics and science**
- **Over 200 institutions of higher education**
- **Over 2600 faculty, administrators, graduate and undergraduate students**

# Research, Evaluation, and Technical Assistance Projects

**MSP KMD (Knowledge Management and Dissemination) project is one of these.**

- *Goal is to synthesize knowledge generated through the Math and Science Partnerships and integrate it into the broader knowledge base for education reform.*



# MSP KMD

- And share that knowledge more broadly
- Hence this meeting

# MSP Knowledge Management and Dissemination Project

Goal: To synthesize knowledge generated through the Math and Science Partnerships and integrate it into the broader knowledge base for education reform

- Deepening Teacher Content Knowledge
- Teachers as Intellectual Leaders
- Involvement of STEM faculty

# Meeting design

- Share information as part of KMD dissemination
- Have MSPs illustrate some of the challenges and lessons learned
- Provide opportunities for teams to consider the implications for their particular contexts.

# Who Is Here?

Teams from 30 states and the District of Columbia, with representatives from:

- Schools/school districts
- Colleges/universities, including both STEM and STEM education departments
- Education service agencies
- State departments of education
- Non-profit organizations, including science museums
- Private foundations
- NSF
- US Department of Education

# Designing High Quality Professional Development

- Each team has designated a target teacher audience to consider at this meeting:
  - Mathematics or science
  - At the elementary, middle, or high school level

# Amazingly brief introductions

- Please stand when we call your subject/grade range;
- When we point to your table, say your name, city, state;
- And be seated.

# Amazingly Brief Introductions

- Elementary science
  - name
  - city
  - state

# Amazingly Brief Introductions

- Middle grades science
  - name
  - city
  - state



# Amazingly Brief Introductions

- High school science
  - name
  - city
  - state

# Amazingly Brief Introductions

- Elementary mathematics
  - name
  - city
  - state

# Amazingly Brief Introductions

- Middle grades mathematics
  - name
  - city
  - state

# Amazingly Brief Introductions

- High school mathematics
  - name
  - city
  - state

# Amazingly Brief Introductions

- MSP teams
  - Consortium for Achievement in Mathematics and Science
  - El Paso Math and Science Partnership
  - Math in the Middle/Nebraska Math
  - Milwaukee Mathematics Partnership
  - North Cascades and Olympic Science Partnership
  - Preparing Virginia's Mathematics Specialists

# Amazingly Brief Introductions

- NSF
- Department of Education
- MSP KMD

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