NSF Research Experiences for Teachers (RET)

Network Meeting at NSTA
Baltimore, MD
November 3, 2006

Roundtable Discussions

1. To best serve all students as they learn science, professional engagement should engage science educators in transformative learning experiences that confront deeply held beliefs, knowledge and habits of practice.

+ (positive)

- Away from textbooks
- Challenges prior conceptions about separate disciplines
- Builds confidence in teachers
- Teacher as student --- relates to learning something new
- Students see their teachers as students too.
- Sets good examples for students
- Reinforces process of doing science
- Science teachers with little science background gain experience

- (negative)

- RET program not long enough to realistically do meaningful research
- Participating professors and graduate students should be complete aware of what their responsibilities are; making a good teacher/professor match
- Science teachers with little science background are a challenge.

Suggestions

- Allow teachers more input in choice of lab assignments
- More multi-university collaboration

2. Professional development programs should maintain a sustained focus over time, providing opportunities for continuous involvement.

+ (positive)

- Learning curve
- Broaden experience within labs
- Networking
- Completion/development of programs
- Teach science the way you have "done" science
- Can share what worked/didn't work with lesson plan from previous years.

- **(negative)**

- Multiple experiences
- Limits numbers of participants, but quality experience/results for teachers in RET
- Communication with university and school district (and RET) after program ends

Suggestions

- Classroom application requirement (doesn't need to be "content" but process)
- What level of research is appropriate?
- Continue with national meeting of RET sites.

3. We have embarked on a nationwide implementation of Engineering into K-12 classrooms. D you think this effort is realistic? How might understanding the Engineering Design process strengthen your skills as a STEM educator?

+ (positive)

- Students will see the connections between many areas (sciences and mathematics)
- RET and similar programs give teachers authentic opportunities to see Engineering in progress, which may not have been part of their prior college experience.

- (negative)

- Could be overwhelming to teachers without professional development opportunities (RET)
- Funding/equipment issues
- Would require more collaboration between science and mathematics curricula designers

Suggestions

- Certification
- “Match.com” for RET
- Some programs could be multi-year
- School district buy-in
- Overlapping projects in RET (similar to overlapping research in fundamental science)