

## **Carousel: What does “success” mean for RET programs?**

Emily Driscoll, RET at Northeastern University (2004)

### **What was the most valuable aspect of your RET program?**

- Collaboration with university scientists; more collaboration with teachers
- GK-12 Fellows come into classroom once a week
- Personal academic and content benefits (inquiry and assessment)
- Able to do own research and design
- RETs have the capability to create their own research activities based on classroom goals
- Moving out of my comfort zone
- Looking at and sharing the adventure of science in discovering
- Ongoing connections, resources and opportunity
- Renewal
- Risk-taking
- Flexibility
- Getting excited about SCIENCE (increase confidence)
- State of the art and current research to share with students
- Professional solidarity
- Fun to have teachers help to inform education programs on campus – more reality!

### **How did participation in a research experience change the way you teach your students?**

- Became familiar with inquiry model and transferred it to my classes
- Enables me to teach my students how physics is really done – bringing Real World applications into the classroom
- Bringing my contacts into the classroom
- Knowing and teaching the skills students need to be successful in college/university labs
- Made my class more hands-on vs. theoretical
- Redesigned labs to be more open-ended and more interdisciplinary
- Became more confident and comfortable about the role and career of research scientist
- Able to boast about RET experience to excite students
- Class looks at teacher differently
- Greater use of technology.
- Contributions from universities and university labs brought into classrooms
- More computer use to integrate technology into science
- Greater exposure to new technology
- Being more patient
- Increased inquiry-based lessons
- Raised expectations for students
- Expose students to real-world problems
- Integration between math and all branches of science
- Collaboration with other teachers (tying others into the experience)

- Students more responsible for learning
- Instincts changed – looking for inquiry strategies everywhere
- Raised the bar of student expectations

**If you could change one thing about your program, what would it be?**

- Less paperwork
- Pre-established assignment for the teacher
- Meeting with PI and team prior to beginning research assignment
- Increase reverse visits – get faculty to develop relationship to the classroom
- Length of time – maybe more, but 10 weeks too much
- Better connection with school district leadership
- Repeat with same PI in next year
- Explain to administration in school districts the importance and significance of RETs
- Specific topic discussions for meetings
- Regional groups sent to RET programs
- Many more [local] teachers involved to transform local environment
- Letters from RET coordinators to highlight our accomplishments
- More time to hash out publishing ideas – help getting stuff published – good for program
- Have RETs make presentation at end of program
- Have RETs go to other schools to present

**What would you suggest to research faculty and staff to prepare for next year's teachers?**

- Start communication *before* the summer experience
- Give teachers option for structured or unstructured research
  - Structured – involvement with current research (pre-teaching)
  - Unstructured – design research that would be conducive to classroom level
- Assume teachers know *nothing* about the research
- Faculty need to read teacher's application and ask questions about background
- Making teacher integral part of the research team
- Provide faculty and research an opportunity to see the teacher's world (visit the classroom)
- Understand how students learn as kids
- Have pre-meeting to prepare teachers for university research
- Be involved! Have a real investment in having an RET
- Create a structure for us to function in
- Recognize that teachers are a value added to the lab
- Have a graduate student dedicated to “teaching” us – good for us and them
- Help us to put multiple (physics) concepts together into a single experiment/project
- Set expectations at both ends

**What have you found to be some of the most valuable resources made available to you as an RET?**

- Practical experience with research funding
- The project and materials connection to current science
- Lab equipment access
- Contact with SMEs, networking
- Being treated as a professional/colleague in research
- Ongoing formal collaboration
  
- Contacts with university staff, other RETs
- CESAME, industrial contacts, etc.
- Able to bring our students to university campus and use the physical resources
- Networking beyond host university
- Teacher professional development: engineering design workshop, inquiry, etc.
  
- Opportunities to present at national meeting and do national networking
- Increased credibility within our school/institution
- Programs catalyst for different curriculum selection

**If you were going to recruit a colleague for an RET program, what would you share regarding your experience?**

- The pay!
- College credit/professional development
- Immersed in the practice of science
- Rejuvenated, change of focus, professional identification
- Removes isolation of classroom, sets up community
- Ability to attend national events – the network
- Made me feel smart! Got me excited again.
- Get to do cool stuff!
- Gives more validity with students
- Keeps us connected to “real science” – cutting edge
- Consider family obligations
- Benefits (parking, meals, commuting, housing)
- Networking amongst previous RETs with those who are considering an RET (including NSTA presentation)
- Increased interest and motivation among students
- Money to spend in classroom
- Opportunity to be at the cutting edge of research
- “Meet the RETs” breakfast to meet and network

**Looking back, what knowledge, skills and/or experiences do you wish you had prior to your RET experience?**

- Advanced information regarding research assignment
- Experience working collaboratively
- Preliminary class/workshops in CAD, HTML, MATLAB, Engineering Design Process, Computer Programming
- Balance between online and face-to-face professional development
- Being able to read, analyze and understand scientific paper
- Bring scientist to classroom prior [to assignment] to understand challenges (videoconference, etc.)
- More definitive expectations of what the PI wants
- Brushing up on mathematics
- Working on collaborative projects with experienced and less experienced teachers, and use as a motivating tool.