

# What I Did on My Summer Vacation

*Middle school teachers make science their summer project*

BY STEVE KARSJEN

SUMMER VACATION CAN MEAN THE SAME FOR teachers as it does their students – time off to relax, vacation or pursue other interests. For eight hard working and committed middle school science teachers, pursuing other interests has led to 4-6 weeks of additional time in the classroom and the research laboratory at the Ames Laboratory for each of the past three summers. The students spent four weeks the first year honing their teaching skills by working on content instruction with a Master Teacher. The second and third years of the program were spent conducting research projects under the guidance of Ames Laboratory scientist/mentors.

The eight teachers were the inaugural group of participants in Ames Lab's Academies Creating Teacher Scientists, or ACTS, program, a Department of Energy program designed to help teachers "progress as leaders of science, technology, engineering and mathematics, or STEM, education." Summer 2009 marked the end of their three-year commitment at the Lab, and as part of their program wrap-up, all eight agreed to discuss how the ACTS experience has helped them become better teachers.

Detailed, unique, fun and valuable were among the words thrown out by teachers to describe their ACTS experience. But two words – "revitalized" and "collaboration" – seemed to surface repeatedly.

"I've been revitalized over the past three years," says Kecia Goodman, an eighth-grade teacher at Ames Middle School in Ames, Iowa. "When I went back into the classroom last year, I had all these ideas, and I wanted to try every one of them and make everything work," she says.

"Science is much more collaborative than I ever thought," says Sharon Andrews, a fifth-grade teacher from the Challenge Center in Sioux Falls, S.D. "In our little classrooms, we don't get

to collaborate with anybody, but that's not what I experienced at Ames Lab where scientists talk to each other all the time. It would be so beneficial if we could do more of that in our classrooms."

Daniel Andrews, an eighth-grade teacher from Ames Middle School, agrees collaboration is important, but adds "dialogue"



*Sharon Andrews (right), Sioux Falls, S.D.*

is the key "take home" he will bring back to his classroom. "If we can tap into the importance of 'dialogue' in our classrooms, that's going to be really powerful," says Andrews.

In addition to classroom-instruction techniques and research experiences, throughout the three-year program, the ACTS teachers toured laboratories, took road trips to other DOE labs, and listened to science experts.

"I can't wait to get back and design some of my own labs using the inquiry techniques that I've learned here," says Rayford



*Kecia Goodman, Ames, Iowa*

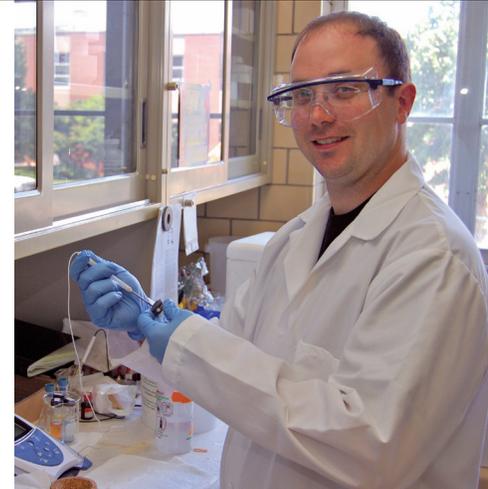
Sims, teacher at Maxfield Elementary School in St. Paul, Minn. "This program has filled a tremendous gap for me."

"As a result of ACTS, I've seen direct impacts on my students," adds Charlie Velasquez, fifth-grade teacher from Mulberry Elementary in Muscatine, Iowa. "I've had a record number of kids doing science fair, and the projects that we've done have been high-quality. This program has been very, very beneficial for me and my students."

"Simply put, I've gained more confidence as a teacher," says Sharon Andrews, which is a fitting ending for the first-term ACTS teachers and the perfect beginning for the new set of teachers who've just begun the program in 2009.

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*Charlie Velasquez, Muscatine, Iowa*



*Daniel Andrews, Ames, Iowa*



*Rayford Sims, St. Paul, Minn.*