

IAA Hosts CASE Institute

By Kirsten Petersen



Teachers collect soil samples near the Comcast Center to create soil profiles. *Photo by Edwin Remsberg*

Working in pairs, students crush clumps of dirt and pore over the particles, attempting to discern silt from sand. Wet clay is haphazardly slathered on each finger like a creamy paste. Conversation and laughter is sporadic, but the clicks and clacks of laboratory equipment are the predominant noises sputtering in the space.

This is not a high school classroom, but soon will be. These students, who are high school teachers, will be replicating this lab assignment in their own classrooms across the country.

The Institute of Applied Agriculture (IAA) hosted 23 secondary education teachers at the University of Maryland, College Park this summer for the CASE Institute. From July 17-28, 2011, educators learned how to teach the “Introduction to Agriculture, Food and Natural Resources (AFNR)” curriculum, designed to introduce students to a variety of agricultural careers, sciences and cultural issues.

The Curriculum for Agricultural Science and Education (CASE) emphasizes the use of science-inquiry and student-led classroom experiences to encourage a lifelong connection to agricultural knowledge and skills. AFNR is a ninth-grade applied agriculture class that serves as the foundation for pathway courses in plant science, animal science, biotechnology and environmental science. By 2018, CASE plans to complete the writing and initial implementation of a four-year agriculture curricula.

Maryland was one of eleven initial funding states for the development of the CASE curricula. Additionally, the Maryland Department of Education identified the CASE Institute as the standard agricultural education for all secondary schools and provided grant funding to support the CASE Institute.

In order to implement CASE courses statewide, educators must be certified to teach courses by attending CASE Institutes, or workshops. Three workshops are currently available—AFNR, and “Plants” and “Animals” versions of “The Principles of Agricultural Science.”

Under the leadership of IAA Director Glori Hyman and IAA Instructor Roy Walls, the College of Agriculture and Natural Resources hosted a CASE Institute for the first time.

Carol Allen, a plant science graduate student who helped coordinate the UMD CASE Institute believes the University of Maryland is the ideal campus for the AFNR workshop. “The original purpose of UMD was to teach the trades to the ‘everyman,’ to bring trade skills to the population,” she said.

The variety of agricultural resources on campus supports the diversity of the AFNR curriculum. For example, the soil samples used in the lab assignment were collected near the Comcast Center, and the assignment was completed in the potting room of the Research Greenhouse Complex. Facilities like the Plant Science building’s horticulture lab and local natural resources like Paint Branch stream supplemented the lessons.



The university’s natural resources and laboratory facilities make it an ideal location for the CASE workshop. *Photo by Edwin Remsberg*

“This is wonderful. The campus is gorgeous,” said Lisa Ann Moschera, a vocational school teacher from East Brunswick, N.J. “To have everything accessible—it’s an ideal setting.”

Allen says the AFNR workshop was “action-packed”—over the course of two weeks educators completed 165 days of units and lessons. Students were in the classroom from 8 a.m. to 5 p.m., learning 5-10 days of classroom instruction and activities. In addition, students received homework

assignments, which they completed at night in their hotel and even during lunch time.

Some teachers found the coursework to be challenging, especially with the time constraints of the two week workshop.

“[I try] to get my homework done as soon as I can—otherwise it’s overwhelming,” said Dave Bowman, a vocational agriculture and science teacher from Hampton, Iowa.

Others were unfazed by the pace of the workshop.

“It’s been kind of a review for me, rather than new, so it has not been too intense,” said Barb Lemmer, an agricultural science and agribusiness teacher from Marion, Iowa.

Nicole Marinos, an agricultural science teacher from Elverson, Pa., had previously completed the “The Principles of Agricultural Science—Plants” workshop.

“I knew what to expect, whereas a lot of people were sort of shell-shocked the first day—but it’s a marathon,” Marinos said.

The AFNR workshop was led by two lead teachers—Melanie Bloom of Sioux Rapids, Iowa and Leslie Fairchild of Columbus, Ohio. Both certified CASE instructors and secondary education teachers themselves, Bloom and Fairchild directed each lesson and challenged the educators to evaluate their teaching.

“It takes teachers a while to adjust to a new style of teaching,” said Bloom. “So the two week institute is almost like a boot camp because we’re really challenging teachers to get out of their comfort zones and try something different.”

For each lesson, educators completed all of the lab assignments and activities that their own students would do in the classroom. Lemmer and Marinos hope that “getting their hands dirty” before the school year starts will reap great rewards.



CASE lead teacher Leslie Fairchild assists educators with a lab assignment. *Photo by Edwin Remsberg*

“We might be able to remember things, so we’ll be less frustrated when we make a mistake,” said Lemmer.

“By going through [the AFNR curriculum], you get an experience for it,” said Marinos. “You learn from it, and then it develops a network of people who can support each other through the whole thing.”

Although the AFNR curriculum covers topics essential to any introductory science course—like plant, animal and food science—educators agree that CASE reinvigorates this basic content.

“It’s a recharge for my students,” said Moschera.

“I think it’s really going to enhance what we’re already doing,” added Marinos.

Bloom believes that the emphasis on student-led classroom experiences will leave a lasting imprint on a student’s appreciation for agriculture.

“This is a really nice blend of leading students to ask questions about certain topics or to question ‘Why is that the way that it is?’” she said. “We present just enough information at just the right time so that students really have that ownership of the materials themselves and hopefully really use that pedagogy to bring those lessons home.”

With the support of a fully prepared curriculum and the experience of the AFNR workshop, educators believe CASE will reinvigorate their teaching as well.

“The biggest thing will be less teaching preparation because [CASE] provides the PowerPoints and they provide the assessment tools,” said Lemmer. “Then I feel like I have more time to interact with the students.”

The CASE lead teachers ensure that the workshops themselves are student-led so that educators can visualize their classroom environment adjusted to the AFNR curriculum.

“I think it’s really important to put teachers into the students’ shoes so that they understand the thought process that their students will be going through when they’re being led through the curriculum as well,” Bloom said.

“We’re proud to have been selected as one of the nation’s host sites,” said Hyman. “The IAA and the college are committed to supporting education in the state. We want high school students to become active learners, and of course, we want them to continue their education at the University of Maryland.”

In June, the State of Maryland passed legislation establishing a new high school graduation requirement for environmental literacy. Bloom asserts that the CASE curriculum naturally incorporates this requirement. The AFNR course materials were released nationally this past spring, and newly certified teachers will be the first instructors to kick off the school year with the official curriculum.



The educators who participated in this CASE workshop are now certified to teach the AFNR curriculum in the fall. *Photo by Edwin Remsberg*