

Faculty Hope to Inspire Future Scientists

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As the fall semester approaches, three professors in the Tulane Department of Ecology and Evolutionary Biology are synthesizing lessons learned from a prestigious summer institute that teaches faculty how to interest undergraduate students in science.



Ready with new approaches to teaching are (from left) Donata Henry, David Heins and Elizabeth Derryberry, who attended a summer institute on teaching science to undergraduates. (Photo by Guillermo Cabrera-Rojo)

“An introductory course in biology might be the only exposure many students have to scientific inquiry in biology,” says David Heins, department chair. “It can be our best opportunity to inspire students to pursue careers in the life sciences.”

Heins, along with Elizabeth Derryberry, assistant professor, and Donata Henry, professor of practice, became National Academy Education Fellows after attending the [institute](#) held by the National Academy of Sciences and the Howard Hughes Medical Institute to address the challenges of undergraduate education.

“Twenty-one of the top 25 paying jobs are in math and science,” says Derryberry, noting that some of the best jobs will be available to ecology and evolutionary biology graduates. “But how do we best prepare them for these jobs? The institute recommends that faculty incorporate principles of active learning in the classroom, because students learn best and retain information the longest when they acquire information through active learning.”

Henry explains, “The goal is to significantly reduce lecture time and replace it with opportunities for students to make observations, identify patterns, develop questions, practice relevant skills and solve problems. In short, as scientists we embrace the scientific method ? why not apply it to our teaching?”

At the institute, the Tulane professors collaborated with faculty from Purdue University to develop an active learning unit on Hein's main area of research, the evolution of the fish species [stickleback](#).

“The teaching unit was a great success and will be incorporated in our new skills-based introductory class beginning fall 2012,” says Derryberry. “We will bring what we learned back to Tulane through this course and a series of events to be held this semester, including those with guest speakers.”