

Source: [Florida Atlantic University](#)

Released: Mon 27-Oct-2008, 08:00 ET

## Bringing Science to "Life" in the Classroom

### Libraries

Science News

### Keywords

PROJECT CHEMBOND, SCIENCE AND MATH EDUCATION, BIOTECHNOLOGY, ENVIRONMENTAL SCIENCE, NATIONAL SCIENCE FOUNDATION

### Contact Information

*Available for logged-in reporters only*

### Description

In comparison with their peers in other countries, U.S. students on average do not perform as well in mathematics and science they longer they are in school. In a major effort to improve science education at the high school level and stimulate interest in science careers, Florida Atlantic University researchers are brining science to "life" in the classroom setting.

Newswise — Education in science, technology, engineering and mathematics in the United States is undergoing great evaluation, in particular, in K-12 education. According to the National Academy of Sciences (NAS), in comparison with their peers in other countries, U.S. students on average do not perform as well on measures of mathematics and science assessments the longer they are in school. Organizations such as the NAS and the National Science Foundation (NSF) are committed to increasing America's talent pool by vastly improving K-12 mathematics and science education, sustaining and strengthening long-term basic research, and ensuring the nation's leadership role in innovation.

The NSF is taking major steps to improve science education at the high school level and stimulate students' interest in potential careers in science. Working jointly with The School District of Palm Beach County, last year Florida Atlantic University was awarded \$2.6 million from the NSF to implement Project ChemBOND (Building Opportunities for Networking and Discussion): The Next Generation in local high schools over the course of five years. The program, now entering its second year, pairs graduate students in science, technology, engineering and mathematics with local high school teachers to enhance science education in the classroom and provide the graduate students with additional skills they need to broadly prepare themselves for professional and scientific careers.

The program was initiated in south Palm Beach County last fall and has expanded to include central Palm Beach County. This year's participating schools include Lake Worth Community High (Lake Worth, FL), Spanish River High School (Boca Raton, FL), Boca Raton High School (Boca Raton, FL) and Santaluces Community High (Lantana, FL).

"This expansion is the result of the resounding support we have received from the high schools we contacted, and their

### Image Gallery



Florida Atlantic University GK-12 graduate fellow Vanessa Seamon performs a density demonstration at Spanish River High School as part of the NSF's Project ChemBOND program.

[Click image to view fullsize](#)



Image 1 of 1



interest and willingness to participate in the program,” said Dr. Donna Chamely-Wiik, assistant scientist and principal investigator for the project in FAU’s Charles E. Schmidt College of Science.

External reviewers from the University of South Florida and the University of Missouri at St. Louis evaluated FAU’s program, giving it a green light to expand into multiple disciplines which now include environmental science and biotechnology. A total of nine graduate students at FAU are working with ninth and tenth grade science teachers and students. FAU has also received permission from The School District of Palm Beach County School Board to conduct research within the participating schools to collect data from exam scores and survey data to evaluate the impact of this project on student success and attitudes about science and careers in science.

“The ChemBOND project has provided my students with a real world connection to make science come alive,” said Eric Dybas, a high school teacher and chair of the science department at Spanish River High School. “The lab activities they are conducting are more powerful and relevant because they have a researcher in the classroom to guide our scientific inquiries using state-of-the-art applications such as those used in CSI investigations.”

One of the major goals of FAU’s ChemBOND project is sustainability beyond the time frame of the project. Researchers at FAU are compiling and developing a portfolio of materials which will include a website and a CD for teachers and students to be used in any high school without the necessity of having a graduate student on hand.

“As a GK-12 fellow of Project ChemBOND, I receive constant training towards the application of scientific thinking outside of the laboratory, the development of a deeper understanding of scientific principles and the art of conveying these often complex concepts to those with limited scientific backgrounds,” said Patrick Cosme, a PhD student in chemistry and biochemistry at FAU. “This fellowship has reshaped my view of the scientific process, strengthened my communications skills and increased my awareness of the research taking place in other departments at the university—all of which serve to make me both a better graduate student and future scientist.”

“Our graduate students who have participated in this program are seeing incredible results in their ability to discuss and communicate science,” said Chamely-Wiik. “Next year, we expect to recruit six more graduate students. In addition, we will continue to follow our current graduate students to gauge their progress as well as their careers as future scientists and academicians.”

- FAU -

Florida Atlantic University opened its doors in 1964 as the fifth public university in Florida. Today, the University serves more than 26,000 undergraduate and graduate students on seven campuses strategically located along 150 miles of Florida’s southeastern coastline. Building on its rich tradition as a teaching university, with a world-class faculty, FAU hosts ten colleges: College of Architecture, Urban & Public Affairs, Dorothy F. Schmidt College of Arts & Letters, the Charles E. Schmidt College of Biomedical Science, the Barry Kaye College of Business, the College of Education, the College of Engineering & Computer Science, the Harriet L. Wilkes Honors College, the Graduate College, the Christine E. Lynn College of Nursing and the Charles E. Schmidt College of Science.

© 2008 [Newswise](http://www.newswise.com). All Rights Reserved.