Junior high girls go high tech

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Eighth-graders Jessica Leyva and Yadira Bañuelos of Lafayette Tecumseh Junior High School have received an introduction in the science of biometrics.

The students were part of Purdue University's GK12 program, which gives middle school students hands-on experience in science and mathematics.

Biometrics is the application of statistical analysis to biological data. It can be used for authenticating and identifying people with devices that check fingerprints, along with iris, retinal and face recognition, hand geometry and vein recognition.

Last week, the two students visited the Biometrics Standards, Performances and Assurance Laboratory at Purdue to learn about scanners and other digital security devices. The $1 million laboratory in Knoy Hall is used for teaching college students, along with testing and evaluating commercially available equipment for companies.

"It is fun to learn all the stuff here," Bañuelos said. "I enjoy watching CSI on TV and knowing about how the FBI uses these things for identification."

"This makes me want to learn more about it."

Purdue doctoral students in the GK12 program taught at four middle schools twice a week -- Tecumseh, Klondike, Southwestern and Frankfort.

Eric Kukula, a graduate researcher, taught the Tecumseh students and supported their science fair project on fingerprinting. The students won second place.

"When I was young, I didn't have any of this stuff," he said. "I am the first college graduate in my family."
"If I can bring some of this to kids and get them excited about science, it is worth it."

The GK12 program is a federally funded interdisciplinary program that gets students thinking about college as they near high school age. A National Science Foundation grant provides about $600,000 a year during a three-year period to Purdue's Discovery Learning Center.

The program also is aimed at helping "underserved" students, especially minorities and females, said Melissa Dark, assistant dean and associate professor of computer and information technology.

"We want to engage students as young scientists," she said. "This program introduces students to authentic problems in science, technology and math.

"A lot of Purdue programs bring students here. This program imbeds graduate students in classrooms."

PHOTO: By Bob Scott/Journal & Courier
Yadira Bañuelos (left) and Jessica Leyva, eighth-graders at Lafayette Tecumseh Junior High School, examine digital images of their fingerprints on May 24, 2007, at the Purdue University Biometrics Standards, Performances and Assurance Laboratory. They were participating in Purdue's GK12 program that introduces science to middle school students.