School to offer science for real world
UD, Howard High program designed to get students to think in new ways

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WILMINGTON -- Howard High School of Technology will serve as the laboratory in a three-year project studying ways to improve high school science instruction.

Starting in the fall, University of Delaware science graduate fellows will team with Howard science teachers to help high schoolers apply scientific principles to real-world problems. The teachers and nine graduate students will focus on "problem-based learning," which teaches science in a more relevant context and measures whether students can use their scientific knowledge in situations they might encounter in future jobs.

The partnership, announced Monday, is funded by a three-year, $1.7 million National Science Foundation grant awarded to UD and the New Castle County Vo-Tech School District.

“Our assessment is typically something that's pencil-and-paper,” said Amy Quillen, science specialist for the district. “These kids will be posed with problems that ask them to use the information in a totally different way. If they can’t do that, we know we need to go back to the drawing board.”

The program also aims to give scientists a better understanding of high school education and practice in explaining their fields of study to a general audience. While continuing their research, the graduate students will spend 10 hours a week teaching alongside Howard teachers and 10 hours developing lessons and instructional strategies.

The graduate students who participate in the program will be those who want a stint in a high school classroom. Their research focuses on topics such as the development of bone density or the life cycles of brown dwarf stars -- topics they will have to be able to explain to high school students in ways that the knowledge can be applied in practical context.

"We scientists typically are good at doing our research, but we’re not so good at communicating it to the public -- its relevance and why we should spend taxpayer dollars to fund it," said UD physics professor George Watson, the senior associate dean of the College of Arts and Sciences.

The project eventually could serve as a national model for science education, he said.

Seeing the link
Howard physics teacher Ronney Bythwood welcomes a chance to measure whether students are seeing the link between lecture-style instruction and lab activities.