

Reducing cancer risk

Students learn to identify disease

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STAFF WRITER

It's never too early to raise awareness. That goes for almost everything in life — especially in life-and-death situations.

That's where a program called "Using Biology and Genetics to Understand Cancer" comes in and where several Central Jersey high schools have leapt into the forefront.

Using breast cancer as the context, high school students are learning how cancer develops and how to identify and reduce cancer risk.

In the project-based curriculum, students follow a case study presenting fictional 14-year old fraternal twins — Stephen and Dominique Williams — who discover their mother has been diagnosed with breast cancer.

Via the twins' "Web site," the students help the twins work through the associated scientific and psychological issues over time, as the family moves through diagnosis and treatment.

At critical decision points, students will then use their knowledge to share information using the twins' blog.

Students then develop problem-solving and decision-making skills, apply their knowledge of the structure and functions of organisms, expand their understanding of genetics and explore inter-relationships between science and technology.

The curriculum was designed by the LIFE Center at the Cancer Institute of New Jersey in New Brunswick and the UMDNJ-School of Public Health's Center for School and

Community Health Education in Piscataway and focused on breast cancer to expand their knowledge of genetics and how cancer develops.

"The kids have really been engaged," said Anne Ippolito, a biology teacher at Piscataway High School who is using the curriculum in her five classes totaling more than 100 sophomores. "The blog idea is so

See **STUDENTS** Page A7

kid-friendly."

Ippolito's students read the background story and then blog back to the twins as if they were communicating with friends.

A role-player from UMDNJ blogs back and a dialogue is established.

Ippolito, who worked with UMDNJ and CINJ over the summer to set up the framework for the program, said that some of her students said they would have enjoyed it more if they had thought the twins were real.

The unit will take two or three weeks. Ippolito also saw it as an "amazing, fun way to review fundamentals" — like cell structure and replication, which should help her students with the state-mandated biology assessment test.

For Bethany Little, who teaches biology to 85 young women — all freshmen — at Mount St. Mary's Academy in Watchung, the curriculum is providing unforeseen benefits because she can fold it into her own lesson plans.

"We are embedding it," Little says "We are pausing and going back to talking about genetics and general information on DNA and RNA."

Little, too, is especially en-

joying her students' reaction.

"They really enjoy it," she says. "It is very basic information, but now they are saying 'Wow! Really!' When they ask questions, it makes everything so much better."

Of particular interest was the pathology report included in the unit, which also proved educational to the teacher.

"I had never seen one," Little said. "One student had actually read a real pathology report."

Little says the format also encourages her students to communicate.

"It's always a contest to see who they (the role-players) respond to," Little says. "It gives them a real-life understanding on a more personal level."

More than 30 New Jersey science and biology teachers were trained in February.

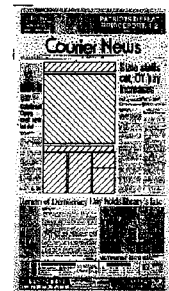
Other participating Central Jersey schools include Westfield, Franklin, Woodbridge, Linden and Perth Amboy.

Laura Hemminger, director of the Center for School and Community Health Education at UMDNJ-School of Public Health thinks this opportunity to learn about breast cancer in the classroom could be a first.

"This will allow students to better understand cancer, specifically breast cancer," she says. "Cancer touches a lot of lives. Health-wise, they will be more empowered."

Hemminger says that students will learn about genetic factors as they relate to breast cancer. She thinks the eight lessons will take about two weeks of classroom time.

"Academically, it will hold their interest and allow them to transfer knowledge in biology class and apply it to a real-life situation," she says. "It's a great curriculum for the sci-



ence classroom.”

The program has the support of the Val Skinner Foundation, the Central and South Jersey Affiliate of Susan G. Komen for the Cure and the Renee Schatz Amdur Fund, members of CINJ's LIFE Center. (LIFE stands for “LPGA pros In the Fight to Eradicate breast cancer.”)

Dr. Deborah Toppmeyer, an associate professor of medicine at UMDNJ-Robert Wood Johnson Medical School who serves as director of the New Jersey Comprehensive Breast Care Center at CINJ and director of the LIFE Center, says there is no other program like this, in terms of breast-cancer health. Its primary goal is to increase awareness in young women.

“We need to do what we can we do to get the message out there to have greatest impact,” she says. “If we teach children young, that behavior sticks with them.”

Toppmeyer says the program is unique. “Since breast cancer is a topic which is not widely discussed in the classroom setting, this curriculum is key in increasing awareness of the disease, among young women especially.”

According to the American Cancer Society more than nearly 180,000 patients nationwide were diagnosed with breast cancer last year, with a little more than 6,000 new cases in New Jersey.

The pilot program was developed with support from the Val

Skinner Foundation, the Central and South Jersey Affiliate of the Susan G. Komen Race for the Cure, and the Renee Schatz Amdur Fund.

“The goal of the curriculum is to improve science skills and increase awareness of breast cancer among high school students,” said Hemminger, director of the Center for School and Community Health Education at the UMDNJ-School of Public Health. “In the classroom, students work with the twins’ Web site to explore the scientific and psychological issues associated with breast cancer. At critical decision points, the students are asked to use their knowledge of the disease to share information on the twins’ blog.”



■ Piscataway High School teacher Anne Ippolito, left, goes over information about breast cancer with student Niara Sutton. The school is using a first-ever science unit designed to raise awareness about the disease.

