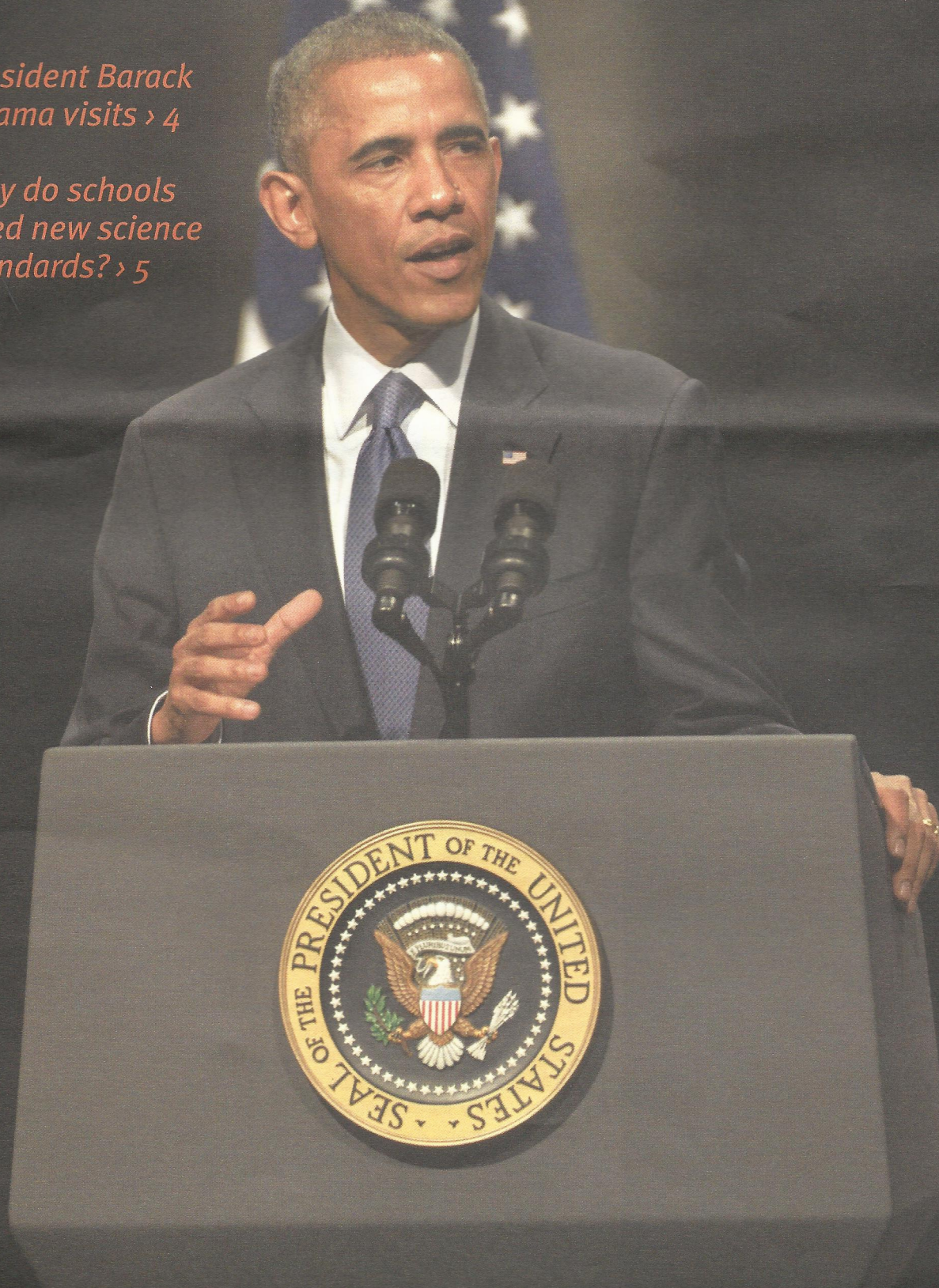


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Kristen Perkins (left) brainstorms with ETHS students on opportunities like Women in STEM. Photo by Jim Prisching

Model partners

A national example for how neighbors work together

It's the kickoff meeting for the Women in STEM club at Evanston Township High School and more than two dozen teenagers are eating pizza, discussing why Barbie once hated math and learning about the group's benefits.

"We'll bring in guest speakers and mentors from Northwestern, have a shadow day with female scientists and go on field trips," student co-leader and ETHS junior Caitlin Westerfield tells the young women over lunch. "It's a great chance to geek out together."

The club, with more than 90 members, has more than tripled in size over the past year, in part due to a unique partnership between the high school and Northwestern, a collaboration that benefits both the schools and the community and one that some see as a national model.

While most school and university partnerships are established to strengthen teacher training and attract potential students, Northwestern has pushed into new territory by literally moving into the high school and creating a partnership office, which is staffed full time by Kristen Perkins of Northwestern's Office of STEM Education Partnerships.

The partnership, often referred to as 'Kits and 'Cats, initially focused on STEM (science, technology, engineering and math) programs. Today 60 to 70 percent of the offerings are still STEM-based, but the collaborations now include everything from political science and poetry to physical education and humanities.

Inside her purple-walled space, which adjoins District 202 Superintendent Eric Witherspoon's office suite, Perkins brainstorms with high school students, works to create new programs such as Women in STEM or

facilitate existing ones, and makes critical connections.

"I make it easier for folks to speak the same language," said Perkins, who can often be seen roaming the lunchroom or hallways, engaging and recruiting students for activities.

"High schools function very differently from universities, but they have a tremendous amount to offer one another," Perkins said. "When students have ideas, I often sit in on meetings — not to run them but to help them find something that makes sense for both. The best kinds of partnerships are win-wins."

Close proximity to Northwestern provides the high school with access to faculty, students, programs, labs, high-tech equipment and facilities. In addition, students of all abilities — not just the highest-achieving ones — can participate in programs. For Northwestern, the high school provides a valuable training ground, new ideas and perspectives and a place to give back through mentoring or other support.

"Northwestern and ETHS are two of the premier schools in the nation," Witherspoon said. "'Kits and 'Cats celebrates our meaningful collaborations and the value added for our students, faculty and entire community."

One program provides Northwestern theater tickets to ETHS students and their families. In another, ETHS families simply invite Northwestern students over for dinner to build bonds between the teenagers and college students.

Some Chicago-area schools, such as Loyola Academy (Loyola University) and Lakeview High School (DePaul University), have expressed interest in creating a similar

relationship, according to Perkins.

“People often say universities are involved in schools, but it’s unique, innovative and a much bigger deal when you get people who don’t normally work inside public schools involved across the board — including arts, science and non-education faculty,” said Wright State’s Gregory Bernhardt, interim director of the National Network for Educational Renewal, which facilitates school partnerships.

Women in STEM, run by Westerfield and fellow ETHS junior Lucy Sattler, started last year to support young women who like science. Providing strong role models is a key aspect of the program. “Northwestern women were eager to reach out,” Perkins said. “My graduate students all said at some point they had someone who was a mentor, who they shadowed or who inspired them,” she said. “They want to be that person.”

Westerfield, 16, knows the value of a mentor; she already has shadowed Northwestern’s Sally McFall, a biomedical engineer and research assistant professor in the Center for Innovation in Global Health Technologies.

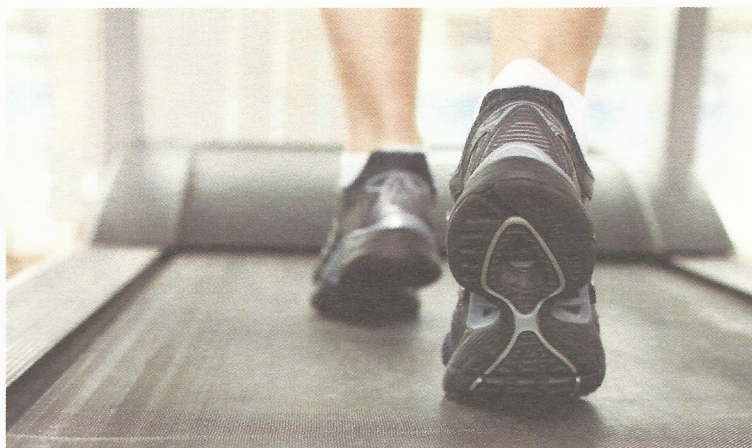
In the lab, Westerfield helped manufacture diagnostic tests for infectious diseases and assembled test kits for a project in Mozambique.

“Working with the Northwestern women has been amazing,” said Westerfield, who enjoyed listening to their advice on coping in a male-dominated field, graduate student life, important classes and research. “(Co-leader) Lucy and I can’t wait to work with more Northwestern students this year.”

Until then, the teens want to raise awareness about the hurdles science-loving women may face. The club flyer notes that 80 percent of women with STEM degrees are not in the labor force, a statistic they hope to change.

“Girls approach problems in very different ways,” Westerfield said. “We might solve them in different ways, too.”

- Julie Deardorff



Northwestern scientists have found that adults can take steps to reverse the natural progression of coronary artery disease.

RESEARCH

You can undo heart disease risk

The heart is more forgiving than you may think — especially to adults who try to take charge of their health, a new Northwestern Medicine study has found. When adults in their 30s and 40s decide to drop unhealthy habits that are harmful to their heart and embrace healthy lifestyle changes, they can control and potentially even reverse the natural progression of coronary artery disease.

Speaking multiple languages is good for your brain

Bilingual speakers process information more efficiently and more easily than those who know a single language, according to a new study from the School of Communication. The benefits occur because the bilingual brain is constantly activating both languages and choosing what language to use and what language to ignore. When the brain is constantly exercised in this way, it doesn’t have to work as hard to perform cognitive tasks, researchers found.

Heavier newborns show academic edge

Birth weight makes a difference to a child’s future academic performance. Heavier newborns do better in elementary and middle school than infants with lower birth weights, according to a Northwestern study. Led by researchers from the School of Education and Social Policy and the Institute for Policy Research, the study raises an intriguing question: Does a fetus benefit from a longer stay in the mother’s womb?

Blood test for depression

A blood test to diagnose depression in adults has been developed by Northwestern Medicine, a breakthrough approach that provides an objective, scientific diagnosis. The test identifies depression by measuring the levels of nine RNA blood markers. RNA molecules are the messengers that interpret the DNA genetic code and carry out its instructions.

Learn about research findings at northwestern.edu/research-nu