



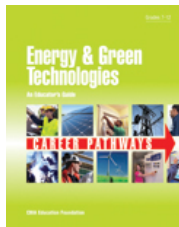
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Lesson in Magnetism a Big Draw

CBIA member company General Electric sparks students' interest in science

By [Lesia Winiarskyj](#)



What do you get when you cross a steel bolt with a tight coil of wire?

Bragging rights.

In a recent science lab on electricity and magnetism, East Hartford High School freshmen trounced their peers from Waterbury and New Britain. The goal? Get as many paper clips as possible to stick to a homemade magnet.

With 59 paper clips dangling from their electromagnetic contraption—constructed of a hex bolt, a D battery, and two feet of insulated wire—East Hartford students were the clear winners, beating Wilby High School's respectable record of 43.

The science lab is part of a series of events in a year-long [Cyber-Challenge](#), a program aimed at amping up students' engagement and achievement in science, technology, engineering, and math (STEM).

Funded by a three-year ITEST (Innovative Technology Experiences for Students and Teachers) grant from the National Science Foundation and administered by CBIA's Education Foundation, Cyber-Challenge seeks to strengthen the pipeline of ninth- and tenth-graders who enter their junior year enrolled in Advanced Placement (AP) STEM classes and who eventually pursue STEM careers.



Making the Connection

Vanessa DeJesus was one of 40 East Hartford freshmen participating in the paper-clip experiment.

"It was very educational," said DeJesus. "I love this lab!"

She wasn't alone. More than 86% of students surveyed said the lab taught them something new in STEM, and 91% said they are now "very interested" or "extremely interested" in enrolling in an AP class.

"I enjoy seeing that 'ah-ha' moment on students' faces," says GE design engineer Brian Mooney [left], who led the activity. "As you watch them working out a problem, seeing everything suddenly 'click' is priceless."

He adds, "What students learn is important, but even more pivotal is the confidence they gain as they connect the dots on their own." Mooney believes it's important for young STEM professionals to visit classrooms and talk about the work they do so that students can visualize someone in the field and relate to that person. "Our hope is that young people come to the realization that it could be them one day."

Classroom outreach also makes good business sense, says Mooney, by "bringing the company name into the community and showing that you're contributing to education. When you connect with students, you're also reaching out to your future employees and customers."

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A Positive Experience

Many of East Hartford's Cyber-Challenge students are females and minorities, two groups traditionally underrepresented in STEM careers. Mooney believes fostering diversity in STEM is critical.

"A good blend of unique experiences and thinking results in better problem solving," he says.

As for how to attract underrepresented youth to STEM classes, CBIA program manager **Mary deManbey** says exposing them to the "fun side of science" is key.

Mooney agrees. "We try to spread a sense of excitement about STEM. I feel programs like this one spark that."

General Electric is a Cyber-Challenge corporate sponsor, along with CBIA member companies Northeast Utilities, **Pfizer**, and United Technologies Corp., all of which are doing similar outreach with high schools participating in the Cyber-Challenge project.



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