

The Boston Globe

Kids' CSI: Evidence of a great idea



By Lawrence Harmon
| GLOBE COLUMNIST

NOVEMBER 24, 2012

A couple of dozen middle school students from Boston put their heads together last week and solved the murder of a 35-year old woman from Charlestown whose life was complicated by a hot-headed boyfriend, sketchy repairman, nosy neighbor, and jealous business rival. Granted, the characters in this murder scenario are fictional. But the students and the scientific techniques they used to solve the crime are real.

The Crime Scene Investigation project for kids is the creation of **Science from Scientists**, a Boston-based nonprofit that has shown repeatedly that students in grades 4 to 8 respond a lot better to hands-on learning than wrestling with science texts. For six hours, 45 students worked their way through various workstations at Northeastern University, where scientists in white lab coats guided them in fingerprinting analysis, chemical identification, typing of (simulated) blood, and paper chromatography.

The kids caught the killer. More importantly, they caught the science bug as they filled pipettes, mixed blood and antibodies, filtered solutions, and examined the arches, loops, and whorls in the latent fingerprints lifted from the crime scene.

“Just because fingerprints look the same, it doesn’t mean they are the same,” deduced Julian Butner-Uga, a sixth grader at UP Academy in South Boston.

Middle-school students get tripped up by science because they consider the subject both difficult and lame. Science from Scientists has found a way to overcome both barriers by offering exciting curriculum assistance to local schools, usually at no cost. Since getting off the ground in 2005, the group has developed dozens of popular programs for the classroom, ranging from eye dissection to celestial mechanics.

Erika Ebbel Angle, PhD, the organization's CEO, hires her staffers based on both subject skills and charisma. She knows a thing or two about this winning combination. The glamorous biochemist, who was named Miss Massachusetts in 2004, became accustomed to signing autographs during her pageant days. But Ebbel Angle is prouder that students routinely request autographs from her chemists, biologists, and other "real scientists" working in 24 Greater Boston schools.

As in any good investigation, there was a lot going on beneath the surface on Saturday. The CSI event was organized by Boston City Councilor Tito Jackson, who said he wants to expose minority students to science careers they might otherwise consider out of reach. Like other councilors, Jackson is in the process of raising his profile for a possible mayoral run next year should the ailing Mayor Menino choose to call it a career. If CSI day was any indication of how even the hint of a mayoral race can inspire creativity on the part of potential candidates, then the larger the mayoral field the better for Boston.

Science from Scientists is also eager for more exposure. The group's operating budget is just \$375,000 per year, which is really tiny for an idea this big. Few of the area's major science- and technology-based companies appear on the group's list of contributors. It's odd considering that companies focused on quality and measuring results should be attracted to a charity that thinks the same way.

Ebbel Angle is married to Colin Angle, the CEO of Bedford-based iRobot. They met while judging a high school robotics contest in 2009, and were married a year later. Angle, who serves on the board of his wife's organization, said Science from Scientists is always looking for ways to quantify the impact of its work. One measure is the science MCAS exams taken by students in grades 5 and 8. Angle said those scores have risen by an average of 13 percentage points in schools that have opened their doors to Science from Scientists.

The couple isn't sure why a nonprofit group with so much to offer has been so slow to grow. Ebbel Angle said that the dearth of global headquarters in Greater Boston makes fundraising difficult. Angle thinks that many of the smaller technology-based companies concentrate their donations on charities in their immediate geographic vicinity. Such explanations are charitable. The bigger problem — discussed among fundraisers — is that many executives of tech companies believe they are already being philanthropic by developing products that make the world more efficient and transparent. Well, they're not.

The students at CSI day learned the motto of forensic scientists: "Every contact leaves a trace." Each encounter takes something and leaves something important behind. It's true in detective work. And it's true in education.

Lawrence Harmon can be reached at harmon@globe.com.