

“Get a Clue” Workshop at Whitehead Institute Teaches Forensic Science to Middle School Students

There’s been a theft. Someone has stolen *Formula X*, a powerful elixir with potent effects. Police have three suspects, all scientists. But whodunit, and who will solve the mystery?

Seventeen junior detectives were on the case in February as participants in *Get a Clue: CSI and the Science of Forensics*, a four-day interactive workshop at Whitehead Institute that used a fictitious crime to teach the basics of forensic science to 7th and 8th graders.

“The purpose of the [Get a Clue](#) workshop was to engage kids’ curiosity,” says Amy Tremblay, Public Programs Officer at Whitehead Institute. “We wanted to make science accessible, and maybe even get kids interested in pursuing science.”

Tremblay collaborated with *Science from Scientists*—a non-profit that strives to improve science and technology awareness in middle school students—to augment existing educational modules and create a new initiative focused on forensic science.

“All of our instructors are scientists themselves,” says Cortney Wieber, an instructor from *Science from Scientists* who led several of the sessions throughout the week and who recently completed her master’s degree at James Cook University in Australia.

At the start of each day, the middle school students gathered in Whitehead Institute’s 7th floor classroom to watch video interviews of three suspects and a victim named Emmet. The suspects included two scientists and a colorful professor, Dr. Decker.

Wieber, who wrote the video scripts with two of her colleagues, says, “The kids were especially drawn to Dr. Decker, the crazy professor with a moustache. By the fourth day they were imitating him and knew his lines by heart.”

After the videos, students participated in hands-on science modules where they learned forensic techniques used by real crime scene investigators, including how to dust for fingerprints and analyze crime scene photos. Wieber says, “They were given all the tools needed to solve the crime. They learned how to analyze unknown hair samples, determine blood type, and analyze a letter’s handwriting.”

Students then participated in interactive exercises with Whitehead Institute scientists. One exercise was led by Dina Zielinski and Melissa Gymrek, both scientists in the lab of [Dr. Yaniv Erlich](#), who discussed genomics and demonstrated how short tandem repeats (STRs) are used to identify people in forensics. Zielinski and Gymrek led an interactive game allowing students to identify whether certain suspects committed a crime based on their STR alleles.

In addition, students had the opportunity to meet with real life forensic specialists from the [Cambridge Police Department's Identification Unit](#), who demonstrated how crimes are solved around the city. Every student took home a picture of their fingerprints, which they dusted themselves.

Tremblay was struck by how rapidly the students learned the science and then used it to search for clues. She says, “Every day they learned new techniques and then re-watched the videos closely. They narrowed the suspects down pretty quickly.”

The kids were so enthralled by Dr. Decker that Wieber made paper moustaches that all the students wore in a group picture (left).

On the final day, the students were asked to form groups based on who they thought stole *Formula X*. Parents attended a session during which the groups presented their “cases” to a packed classroom. On the walls were posters covered in evidence gathered throughout the investigation, such as photos of fingerprints, scribbled notes about motives, and pictures with suspicious objects circled. “The students asked penetrating questions during the presentations,” says Wieber. “And their debating skills were impressive.”

Wieber thinks *Get a Clue* was a great way to get kids interested in science. She says, “When I was their age, I thought science was for old men in dusty lab coats. I didn’t know I could be a scientist until college.” Wieber thinks learning about science in 7th and 8th grade gives kids an advantage before high school, a time when science can seem intimidating.

“There was such camaraderie by the end of the workshop,” says Tremblay. “The students became friends and by the last day they were exchanging phone numbers and emails.” Several of the students had returned from last summer’s successful [CampBio Program](#) at Whitehead Institute. Tremblay says she plans to offer the *Get a Clue* workshop again next year.

As for the moustaches, Sherlock Holmes would have been impressed.