

Brooks Elementary School

Pilot STEM After School Program

For four weeks on April Wednesday afternoons, CIS, Aurora University and Brooks Elementary School delivered a pilot STEM program to 25 third graders. The topic of Forensics had been chosen by the PTO STEM committee from Brooks. Aurora University students who helped implement the program were Chair- Elise Raz, Jasmine Shaw, and Paige Ronnenberg. The Aurora University curriculum developer was D. Jane Davis. The Brooks site supervisor was Mr. Gupta. Treats were provided by the Brooks STEM Committee.

The first week, students were exposed to fingerprinting. First we made three thumbprints of each student on balloons. When we blew the balloons up, the fingerprints were easier to analyze. Each student was able to categorize their own and other students' fingerprints, and we explored which types were most common. This in turn led to a discussion of why that would be important in solving crimes. That day also included bite mark analysis, when we had students do sample bite marks on Styrofoam plates, then match their own and other students tooth impressions.

The second week, we had students step in sand and then filled their foot impression with plaster of Paris that they could then use to make measurements. By using the length of a foot impression, the height of a suspect can be calculated. To add visual evidence to support the equation we used, we had students draw their outline on a piece of paper, cut it out, and compare it to their foot length. The plaster of Paris foot was sent home with the children that day. We also had a unit on tire track analysis, demonstrating how careful measurement and pattern recognition are an important part of a forensic investigator's profession.

The following week, we did powder analysis, where we used common house hold powders that at first glance look alike (cornstarch, sugar, salt, and baking soda) can be distinguished using a magnifying glass and common household chemicals- water, vinegar and iodine. We also did "Alien Blood Splatter Analysis" to analyze the different characteristics that a fake blood has when dropped from different heights and from different objects. (It was the week of the Boston bombings, so we turned the blood green and declared it was from aliens.)

The final week began with tool mark analysis. Then we had a treasure hunt, where students used the techniques they had learned throughout the program, and their math, geography and art skills, to find clues and solve puzzles. This was certainly a highlight! While different groups were on the hunt, the rest listened to children's detective stories and played a detective game. Papers and materials were sent home with the students at the end of the program.