Thank you!

I want to express my appreciation to The Beacon Society for making *Getting SMART with Sherlock* possible through the Jan Stauber Grant. I was happy when I learned that Preston Royal Branch Library had received the grant.

The purpose of this program was to introduce kids to the stories of Sherlock Holmes, his deductive reasoning skills he used and the advanced science that not even police used at the time the adventures were written. With so many adventures and so many crime scene methods, I hosted 8 sessions, ending with a mock case that the kids could use their newfound skills. The first 20 minutes of the meeting was a book club, where we discussed the pre-read story. I would then use it to introduce the method we were going to investigate that day. We would spend the rest of the meeting learning about the topic and doing hands-on experiments to experience how it is completed.

We read and discussed *A Study in Scarlet* at our first meeting. I decided that the hands-on part of the meeting would focus on evidence vs. inference since one of the first things that Sherlock says is that the police report "contain[s] the vital essence of the whole matter." Sherlock had a keen eye for not only noticing things when he examined a crime scene or a piece of evidence, but also the ability to infer what could not be seen. The kids were challenged with telling the difference between evidence and inferences using velvet bags (allowing them to feel, but not see or hear an object) and easter eggs (allowing them to hear, but not see or touch). The kids were only right about 40% of the time where they had to infer what was inside, without opening the bags or eggs.

With one of the most vital pieces of evidence being a thumb-mark, we read and discussed *The Adventure of the Norwood Builder* for our second session. Conan introduces the idea of fingerprinting when he has Sherlock ask Lestrade, "You are aware that no two thumb-marks are alike?" In introducing the topic, we learned about the different types of patterns and whorls that can be found in fingerprints and then practiced lifting fingerprints using plastic cups with fingerprints and a forensic fingerprinting kit. After lifting the print and examining it, the kids were able to lift their thumb-print off of a cup and place it on an evidence card.

For our third session, we read and discussed *A Case of Identity*. The best book for the topic of blood would have been *A Study in Scarlet* since Conan declares, "Why, man, it is the most practical medico-legal discovery for years. Don't you see that it gives us an infallible test for blood stains," but we had read it for our first meeting. The kids learned about blood splatter through several hands-on experiments to see how things like angle, height and distance could change how the blood appeared.

At the fourth meeting, we read the Adventure of Shoscombe Old Place which begins with Holmes stooped over, using the microscope, and then steps out of the way to show Watson that the blobs were glue. The kids used the microscopes we were able to purchase to see how a variety of objects appearance can appear to the naked eye as similar, but through the lens, there are a great many differences. I gave them some evidence and then had a sample board of similar buttons, glitter, cloth and a few other objects to compare and decide which sample matched the evidence.

We read Sign of Four at the meeting in January, where the kids learned about scent identification. Sherlock was well-known to have a keen sense of smell and used his nose to help solve many crimes, even being mentioned that he knew 75 perfumes. Using film canisters, cotton balls and essential oils, I premade 12 different scents, both familiar and unfamiliar. We did a lot of sniffing as the kids went through each and tried to identify the scent. When they finished, I gave them a film canister with a scent in it. They then had to figure out which scent it was.

At our sixth meeting, we read the Adventure of the Reigate Squire and talked about Handwriting and Paper Analysis. I had about 15 different types of paper for them to match up to the sample. Many had visibly obvious differences, but the kids were surprised to find how some paper that looks so similar could have so many differences (weave, shade, florescence, chalk writing, etc.) that could only be seen by UV flashlight, a magnifying glass or the microscopes.

For the seventh meeting we read the Boscombe Valley Mystery and focused on learning about footprints, the different types of treads on shoes, and figuring out the approximate height of a suspect based on the measurement of their foot. The kids learned a formula that, based on the length of their footprint, could get within a 2 inch range from their height. They were shocked by the fact that a little formula and the size of their foot could result in such a close match to their own height.

In our seventh meeting, we read the Adventure of the Gloria Scott which can only be solved by Cipher. Even though, the case is solved using the Dancing Men Cipher, we focused more on the pigpen cipher (created by the masons) because they were really confused by the intricacies of the Dancing Men Cipher.

For our eighth meeting, I had planned on us reading The Final Problem and learning about DNA (even though it is not one of Holmes investigation techniques), but my person who was going to assist me fell through and since none of the kids had been able to attend every program, I decided to do a review to prepare them for the mock case.

Using the framework from a boxed murder mystery found in a closet that hadn't been used in decades, I reworked it to include all of the above investigations to be included in the case. An athlete had been murdered behind the library. There were footprints, blood splatter, trace evidence, a broken button, a book of love poems found near the body and a handwritten note on watermarked paper in the victim's pocket. There was not enough time to let the kids collect all of the evidence during the mock case, so I created evidence bags for each of the ten suspects. Inside them were a handwriting sample on whatever type of paper that was found at their home; a button of similar color to the button in evidence; a fingerprint card; and a shoe tread sample. They did get to investigate and collect evidence from the victim's room. In processing the evidence and following the leads, the majority of the kids figured out that the coach had murdered the athlete because the star athlete was going to go to a new school, leaving him and the coach's hopes of moving up behind. Two kids were distracted by some of the evidence that pointed to another suspect. With some guidance, "go back and check," they figured out the solution. All participants, once they solved the case, received a Sherlock Holmes book to allow them to begin their collection of all of Sherlock Holmes adventures.

Overall, the kids enjoyed the hands-on experiments. Several of the kids expressed their appreciation for introducing them to the stories and techniques used by Sherlock Holmes and looked forward to going home with their new book and reading the some of the other adventures.

Thank you for giving us this opportunity to provide programming to engage our young patrons with the stories of Sherlock Holmes! I believe the program was a success and know we would never have been able to provide this level of a Sherlock themed STEM program without your assistance.

Thank you!

Aimée Knightly Children's Librarian

































