

Case File: 4-Her's Investigate

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The University of Kentucky's Professor of Biotechnology, Dr. Joe Chappell has some lucky delegates investigating the "Murder of Mike Dahurtzalot". Their evidence is some hair left behind at the scene of the crime; it was believed to be pulled out in a struggle. The suspects are Fernando "The Crusher" Feliz and Mary "Daddy's Little Angel" Poppins.

The series of experiments the "investigators" conduct stimulate the processes used to solve a criminal case through DNA fingerprinting. The delegates received three samples of DNA, one from evidence at "the crime scene" and two others from "two suspects in custody".

One of the adult volunteers, Clay, had some information for SPOT regarding the experiments used to determine "the guilty suspect". He told us that the crime scene investigators are growing DNA by transforming E-coli. Dr. Chappell explained this process to the delegates that they would use to determine the guilty suspect. Clay in this process was adding molecular biology to the process. He explained that when the delegates would grow the E-coli on plates that were selected for the bacteria with the plasmid in them. Then they will



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"cut" the DNA, which is also known as restriction enzyme analysis, from the plasmids and separate the bands (strips of DNA) on gel by electrolysis. After this process is complete it will be possible to identify the types of DNA that match, which will determine the guilty assassin.

Throughout the process, the delegates work with lab equipment supplied by the university. Dr. Chappell informed us that the formation of these types of workshops have been in the making since 1992. It was during a workshop in a state park that Mrs. Kathy Junker was motivated to bring "CSI" programs into 4-H. She said the most difficult aspect of organizing this workshop was getting the word out so that teens would be interested.

