Students learn about forensic science while working together to solve a murder!

Curriculum/State Standards
This project uses scientific inquiry methods during field and laboratory investigations, as well as critical thinking and scientific problem solving skills.

Overview
Students use problem solving skills to narrow down suspects that could have possibly committed the “mock” murder in the Sunray Middle school science lab. They analyze the evidence and try to solve the murder.

Objectives
The student will gain scientific inquiry skills by attempting to solve the murder mystery with evidence collected at the crime scene.
The student will gain field and laboratory skills by crime scene observations, sketching the crime scene, and analyzing the evidence.

Materials
stuffed clothing with newspapers ("victim"), crime scene tape, alibis worksheet for all suspects, hair and fingerprint samples from all suspects, ink pad, digital camera, simulated blood typing kits, microscope and slides, evidence to be found at crime scene (worksheets that have blood, hair, and fingerprints), a “murder weapon,” and other evidence (footprints, etc.).

Readiness Activity
Students study blood types and how they are inherited. Discuss with students what forensic science is and do some research on the topic. Students study the different fingerprint alleles that can be inherited.

You might also want to bring in people from your local police or sheriff’s office to visit with the students about how they solve crimes, fingerprinting techniques, and interviewing techniques. Use the crime scene 1: forensic investigation kit, document analysis kit, and fingerprint kit to also give students some more information and practice to get ready for the mystery.

Strategies/Activities
1. Set up the crime scene with victim. Have students in teams to be the detectives.
2. Have prepared alibis of the suspects (all teachers) to be handed out to students or videotape the suspects reading the prepared alibis.
3. Give the students the “time that the coroner set for time murder was committed” so they can narrow down which suspects would have been in the school and could have committed the crime.
4. Allow students to take pictures of the crime scene with digital camera and observe the pictures on computer. Allow each group to go to crime scene for about three to five minutes at a time.
5. Have available to the students all of the suspects’ fingerprints and hair samples. You can have teachers use an inkpad and put fingerprints on paper. Take their hair samples and put on microscope slides for students to view under microscope.
6. Allow students to interview or question their suspects. Allow each group to question for about three to five minutes at a time. The students interviewed me and I was the suspect.

THIS WINNING PROJECT IDEA SUBMITTED BY:
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GRADE LEVEL
8

ARTS

LANGUAGE

MATH

MISC

SCIENCE

HISTORY

SOCIAL STUDIES

WEEKS
2

TOTAL BUDGET
$500
that they needed to question. I would be any suspect that they wanted to question because our teachers were not able to come down every class period to be questioned.

7. You want to prepare your evidence. I put the murderer’s hair and fingerprints on a student’s worksheet. I had a different murderer for each class. After they located the hair and fingerprints left behind by the murderer they had to analyze and determine which suspect matched.

8. They also would find the murderer’s blood at the crime scene. They had to do blood typing to determine what type of blood the murderer had. They also typed blood for the suspects. They could narrow down which suspects had the murderer’s same blood type.

**Culminating Activity**
To solve the murder mystery the students had to have:
- a. the correct murderer
- b. the correct fingerprint sample that belonged to the murderer
- c. the correct hair sample that belonged to the murderer
- d. the murderer’s correct blood type

The first team to solve the mystery correctly won!

**Evaluation Method**
1. After reading through the alibis of all the teacher suspects, the students had to narrow down to only five suspects that could have committed the crime. In the alibis, I created only five suspects that were in the school building at the time of the murder. They received a grade for the five suspects.
2. They had to write questions (that were graded) to interview their suspects.
3. They received a grade for the blood typing. They had to follow the directions in the simulated blood typing kit with no help from the teacher. I checked to see if they got the correct blood type for the five suspects they chose to blood type for and the murderer’s blood type.
4. They received a grade on how many parts they got correct when they solved the mystery.