

FORENSIC SCIENCE

NEW MODULE ADDITION

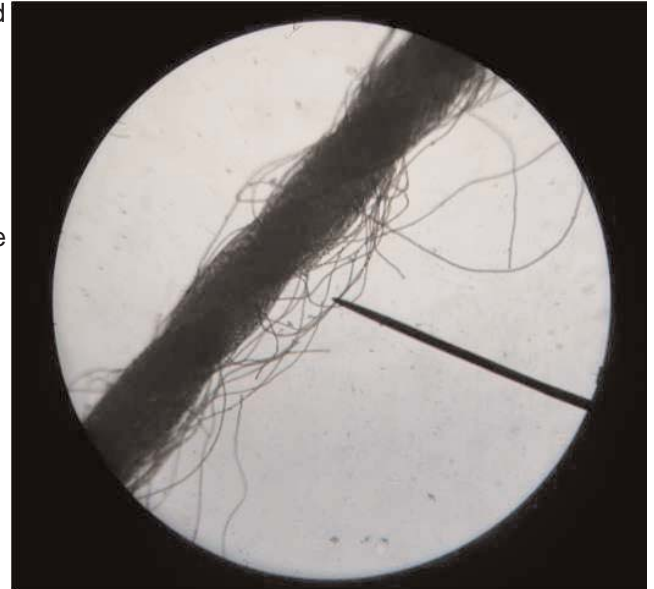
Objectives

1. Explore how forensic science is used in criminal investigations.
2. Apply the principles of forensic science to a hypothetical crime.
3. Use applied mathematics to solve a forensic investigation.
4. Gain an understanding of the tools and equipment used in forensic investigation.
5. Determine through experimentation the properties and characteristics of various materials.
6. Explore the careers associated with forensic science.

In 1784 the first use of documented forensic matching was used to convict a man of murder. The conviction was based on the torn edge of a wad of newspaper left at a crime scene that matched a remaining piece in his pocket. Crime scene investigation has come a long way since then and now by using new tools and scientific techniques we can bring forensic science into the middle school classroom.

Our new Forensic Science module provides students with the opportunity to both explore how forensic science is used in criminal investigations and to gain an

understanding of the importance of the math and science used within investigation.



Module Synopsis

Students explore the history of forensics and gain an understanding of how the use of science and math have augmented criminal investigation. They then study the characteristics of fingerprints and how fingerprints are used in solving crimes. Students then learn how to lift a latent fingerprint and using the scientific method, match the fingerprint to the classroom "criminal". Students measure replicas of human bones and use math skills to determine the height of the victim. Next, students enter the "Evidence Room" for the culminating 3 day project in the module. They study the characteristics of fibers and using a computer based microscope,



investigate a crime based on fiber samples left at the scene. Also left at the crime scene was a note, and using a paper chromatography process, students determine the owner of the pen that was used to write the note. Finally students examine footprints left at the scene and analyze soil samples from the shoes of the suspects to make a final determination of the guilty party.

Standards

- NSES 1.1 Abilities necessary to do scientific inquiry.
- NSES 1.2 Understandings about scientific inquiry.
- NSES 2.1 Properties and changes of properties in matter



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