

AVENTA LEARNING

Course Description

FORENSIC SCIENCE

COURSE DESCRIPTION:

This course opens with an exciting mock crime scene. Students investigate and collect trace evidence using the scientific inquiry method. Students will learn how to lift latent fingerprints and shoeprints, examine different toolmark impression evidence, examine microscopic fiber as well as human and animal hair evidence. These student investigations will aid in discovering “who dun-it” in the commission of this mock crime. In addition, DNA lab testing results will present lively discussion opportunities used in the genetic analysis of evidence discovered. Students will also conduct close examinations of handwriting analysis in scene documents to help narrow their search for the perpetrator of this crime. Students will traverse through this course by uncovering one clue at a time and studying the forensic science analysis methods used to unveil suspects in the case.

PREREQUISITES: none

COURSE LENGTH: ½ Credit

REQUIRED TEXT: *none*

COURSE OUTLINE:

Unit 1: Documenting the Crime Scene

Securing the crime scene
Crime scene photography, sketches and notes

Unit 2: Chemical Analysis

Chemical properties
Chemical bonds
Acid-base chemistry including beverage chemistry

Unit 3: DNA

Structure and properties of DNA
Mitochondrial DNA
DNA as evidence
Controversy surrounding DNA databases

Unit 4: Fingerprints

History of fingerprint analysis
Types of fingerprints
Fingerprint identification
Various methods of collecting fingerprint evidence

Unit 5: Soil

Types of soil
Soil analysis
Types of microscopy
Collecting soil evidence

Unit 6: Questioned Documents

History of paper
History of ink
Handwriting analysis
Types of questioned documents
Questioned documents as evidence