Unit 1: Evidence tells the story of a crime

Content Area: **Science**
Course(s): **Forensic Science**
Time Period: **September**
Length: **12 Blocks**
Status: **Published**

Enduring Understandings

Physical evidence includes all objects that can establish that a crime has been committed and can link the crime and its victim to the perpetrator.

Investigators record the crime scene and examine the scene as the perpetrator left it.

Forensic scientists use identification and comparison method to analyze physical evidence.

Essential Questions

Why is forensic science important?

How is television impacting the study of forensics?

Standards

SEP.1	Asking Questions and Defining Problems
CCC.1	Patterns.
	Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.
SEP.1.a	Ask questions
CCC.1.1	students observe patterns in systems at different scales and cite patterns as empirical evidence for causality in supporting their explanations of phenomena. They recognize classifications or explanations used at one scale may not be useful or need revision using a different scale; thus requiring improved investigations and experiments. They use mathematical representations to identify certain patterns and analyze patterns of performance in order to reengineer and improve a designed system.
SEP.1.a.1	that arise from careful observation of phenomena, or unexpected results, to clarify and/or seek additional information.
CCC.2	Cause and effect: Mechanism and explanation.
	Events have causes, sometimes simple, sometimes multifaceted. A major activity of science is investigating and explaining causal relationships and the mechanisms by which they are mediated. Such mechanisms can then be tested across given contexts and used to predict and explain events in new contexts.
CCC.2.1	students understand that empirical evidence is required to differentiate between cause and correlation and to make claims about specific causes and effects. They suggest cause

	and effect relationships to explain and predict behaviors in complex natural and designed systems. They also propose causal relationships by examining what is known about smaller scale mechanisms within the system. They recognize changes in systems may have various causes that may not have equal effects.
SEP.3	Planning and Carrying Out Investigations
SEP.3.d	Select appropriate tools to collect, record, analyze, and evaluate data.
SCI.9-12.1.2	Classifications or explanations used at one scale may fail or need revision when information from smaller or larger scales is introduced; thus requiring improved investigations and experiments.
SCI.9-12.1.4	Mathematical representations are needed to identify some patterns.
SCI.9-12.1.5	Empirical evidence is needed to identify patterns.
CAEP.9.2.12.C	Career Preparation
CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.

Assessments

Performance: Lab Assignment
Lab: Locard's Exchange Principle Students keep a journal or what they that day and then they bring in the shirt that they wore (analyze the fibers, etc.)

Performance: Lab Assignment
Lab: Personal Identification – Bertillion System Students measure various parts of body for classification.

Performance: Authentic Task
Activity: Quick Draw Students to draw the crime scene based on description given.

Performance: Lab Assignment
Lab: Crime Scene Analysis Students collect evidence, sketch crime scene, collect notes and present findings to class.

Content

Vocabulary

Autopsy

Chain of Custody

Physical Evidence

Rough Sketch

Finished Sketch

Standard sample

Substance control

Buccal swab

Class Characteristics

Comparison

Identification

Individual

Characteristics

Product Rule

Learning Objectives

1.1 Define forensics and list the major disciplines it encompasses
1.2 Recognize the major contributions to the development of forensic science
1.3 Account for the rapid growth of forensic laboratories in the past forty years
1.4 Describe the services of a typical comprehensive crime laboratory in the criminal justice system
1.5 Compare and contrast the Frye and Daubert decisions relating to the admissibility of scientific evidence in the courtroom
2.1 Define physical evidence
2.2 Discuss the responsibilities of the first police officer who arrives at a crime scene
2.3 Explain the steps to be taken to thoroughly record the crime scene.
2.4 Describe the proper procedures for conducting a systematic search of a crime scene for physical evidence
2.5 Describe proper techniques for packaging common types of physical evidence.
2.6 Define and understand the concept of chain of custody
3.1 Explain the difference between the identification and comparison of physical evidence
3.2 Define and contrast individual and class characteristics of physical evidence.
3.3 Appreciate the value of class evidence as it relates to a criminal investigation.
3.4 List and explain the function of national database available to forensic scientists