

## Hamburg Area School District Course Guide

Name:	Forensic Science I
Grade(s):	9-12; Passed or concurrently enrolled in Biology
Length:	Place an X next to the correct option
	Full-Year (180 Sessions)
х	Semester (90 Sessions)
	Quarter (45 Sessions)
	Other (Specify):
Text:	NoneSupplemental Materials Utilized
Approved on:	5/21/2018

Course Description:

Forensic Science 1 is an introductory forensic science course written for high school students that focuses on observation skills, identification and collection of physical evidence, processing and investigating crime scenes, fingerprinting, and the recognition of manner, mechanism and cause of death. This course will heavily involve student in laboratory based assignments, crime scene investigations, and analyzing and reporting their findings.

## Forensic Science I

Unit: <u>Unit 1: History of Forensics</u>

Unit Length: (3 weeks - 15 sessions)

ESSENTIAL QUESTION- ESSENTIAL CONTENT	PERFORMANCE OBJECTIVES	LAB ACTIVITY/ASSESSMENTS
Did the growth of different science venues lead to a science of solving crime?	Explain and articulate how the growth in the fields of science have assisted in the evolution of crime solving.	
How have individuals furthered forensic science?	Build an active timeline that show the historical connections to current day practices in the field of forensic science.	1. Timeline Research Project, Presentation, and Peer Quiz - Build an active timeline to show connections between current day CSI to its initial points of origins in technology, theory, or law.
How is crime scene investigation still advancing?	Identify modern technologies used for crime scene investigation and explain how the technology has evolved and improved over time.	1. End of Unit Assessment

## Forensic Science I

Unit: <u>Crime Scene Investigation</u>

Unit Length: (4.5 weeks - 22 sessions)

ESSENTIAL QUESTION- ESSENTIAL CONTENT	PERFORMANCE OBJECTIVES	LAB ACTIVITY/ASSESSMENTS
Careers in Forensic Science	Identify the types of professionals who might be present at a crime scene.	<ol> <li>Career analysis online research activity</li> <li>Self-reflection of student's strengths and interests for career choices</li> </ol>
How does observation play a role in crime scene investigation?	Define observation, and describe what changes occur in the brain while observing. Relate observation skills to their use in forensic science.	
What are the ways to accurately record a crime scene?	Identify the methods by which a crime scene is documented.	<ol> <li>Project 1: Practice and submission of quality photography of evidence and scene</li> <li>Scaling drawing of handheld objects for practice</li> <li>Project 2: Individual scaled sketch of basic crime scene</li> </ol>
Why is packaging evidence correctly a priority in the field of forensics?	Demonstrate proper technique in collecting and packaging trace evidence.	<ol> <li>Assessment on the 21 evidence categorizations</li> <li>Analysis of fictional cases to determine class vs individual evidence</li> <li>Lab: Packaging and Preservation</li> </ol>
What protocols must be followed at the scene of a crime?	Explain the importance of securing the crime scene - Focus on CSI protocols of safety, securing the scene, note-taking, photography, scaled sketches, interviewing eyewitnesses, collecting	<ol> <li>Analysis of the LAPD investigation of the double homicide of Nicole Brown Simpson and Ronald Goldman (OJ Simpson Case Study)</li> <li>End of Unit Assessment</li> <li>Staged Crime Scene #1 - Students</li> </ol>

	and packaging evidence.	will apply knowledge of chapter and appropriate protocols
Are eyewitness accounts reliable?	Describe examples of factors influencing eyewitness accounts of events.	
	Compare the reliability of eyewitness testimony to what actually happened.	

Unit:FingerprintingUnit Length:(5 weeks - 25 sessions)

ESSENTIAL QUESTION- ESSENTIAL CONTENT	PERFORMANCE OBJECTIVES	LAB ACTIVITY/ASSESSMENTS
How did fingerprinting become such an important part of forensic science?	Outline the history of fingerprinting.	<ol> <li>Research Essay: The contributions of particular individuals and cases that ushered fingerprinting into the 20th/21st century</li> </ol>
How are fingerprints individual?	Describe the characteristics of fingerprinting.	<ol> <li>Activity: Roll prints and identify general ridge pattern and systematically classify using the Henry Classification System (FBI)</li> <li>Activity: Fingerprint shape and minutiae recognition and identification</li> <li>Lab: Practice lifting, preserving, and identifying prints of mystery classmates</li> </ol>
How do investigation teams locate, lift, and preserve fingerprints?	Summarize the proper procedures for collecting fingerprint evidence. Lift and identify latent prints. List the techniques for developing latent fingerprints on porous and nonporous objects.	
Is fingerprint analysis truly objective?	Present and refute the arguments that question fingerprint evidence reliability.	<ol> <li>Video and written/class discussion on the wrongly accused case of Brandon Mayfield (Madrid Train Bombing) - <i>Relation to how social</i> <i>biases may play a role.</i></li> </ol>
What are the fundamentals of fingerprinting?	Compare and contrast the basic types of fingerprinting and their respective subclasses.	<ol> <li>Unit Review</li> <li>Final Unit Assessment</li> <li>Crime Scene #2 - Focus on all CSI</li> </ol>

	Describe how criminals attempt to alter their fingerprints.	protocols from previous crime scene in addition to locating fingerprints, lifting and preserving fingerprints, identifying prints by shape and characteristics, making a positive match.
How are fingerprints analyzed and compared?	Prepare a ten card and analyze the ridge patterns of the print.	

Unit: <u>Autopsy</u> Unit Length: (<u>5 weeks - 25 sessions</u>)

ESSENTIAL QUESTION- ESSENTIAL CONTENT	PERFORMANCE OBJECTIVES	LAB ACTIVITY/ASSESSMENTS
Medical terminology - Anatomy	Identify and recall parts of the human anatomy to explain and perform an autopsy.	<ol> <li>Activity: Build a scarecrow and label 40 anatomical regions necessary for technical autopsy text reading</li> <li>Assessment - 40 anatomical regions on human anatomical cartoon</li> </ol>
How do investigation teams use the human body as physical evidence?	Distinguish among cause, manner, and mechanism of death.	<ol> <li>Protocols of an autopsy.</li> <li>Assessment: Image and written identification of contusions, abrasions, lacerations and other bodily marking associated with specific crimes</li> </ol>
How can a deceased victim share clues of their death?	Describe the procedures of an autopsy, and give examples of how an autopsy helps establish the cause of death, the manner of death, and the postmortem interval. Explain how algor, livor, and rigor mortis develop following death and describe how their development is affected by environmental factors.	<ol> <li>Analysis Questions: Analyze primary sources; autopsy reports of JFK Jr., Trayvon Martin, Michael Jackson, Caylee Anthony</li> <li>Assessment: Fictional Case studies to algor mortis, rigor mortis, and livor mortis to narrow down the time of death</li> </ol>
How are the details of a death and its autopsy examination formally documented?	Write a formal report that replicates an official autopsy report.	<ol> <li>Project Part 1: Formally written document of fictional death created by student. Must use anatomical terminology and well as all standards for an autopsy report set by the National Association of medical Examiners</li> </ol>
How are autopsies performed?	Describe the procedures of an autopsy,	1. Project Part 2: Create a life size

and give examples of how an autopsy helps establish the cause of death, the manner of death, and the postmortem interval.	torso, including all major organs and cranium to show signs of death 2. Presentation: In small teams, will perform a revised version of an autopsy on the fictional body
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