Grade: 8-12
Course: Forensic Science 2
Year: 2022-2023
Credit: 0.5 Elective HS Science Credit

Suggested Pacing	Content Standards	Learning and Performance Expectations What must students know and be able to do?	Assessment of Learning Options How will we know if they learned this skill?	Resources Options	Connection to 
About 3 weeks (Quarter 3)	**ISTE Standards** 1. Empowered Learner 2. Digital Citizen 3. Knowledge Constructor 4. Creative Communicator **Ohio's Common Core State Standards - Technology** 6-8.DT.2.a 6-8.DT.2.b 6-8.DT.2.c 6-8.DT.2.d 6-8.DT.2.e 6-8.DT.3.a 6-8.DT.3.b 6-8.DT.3.c 6-8.DT.3.d 6-8.DT.3.e **Ohio's Common Core State Standards - ELA** RI.7.1 RI.7.2 RI.7.3 RI.7.4 RI.7.5 RI.7.6	• Brief understanding of human fetal development and when fingerprints are formed in utero. • Differentiate between an arch pattern, loop, and whorl. Go further and identify the specific type of main pattern-regular vs. tented arch, left loop, right loop, double loop, center pocket loop, etc. • Be able to use contrast powder to lift a latent fingerprint off of a hard surface. • Be able to use cyanoacrylate fumes to lift a fingerprint off of a slippery surface.	Ink Handprint Observation Activity Graphite Fingerprint Exploration Activity Ten Card Ink Fingerprint Lab Contrast Powder Latent Lifting Lab Cyanoacrylate Lifting Lab Fingerprint Test	Bertino and Bertino Chapter 6 Saferstein Chapters 12 & 13 Saferstein Appendix IV Genge pp. 21-57 Dermatoglyphics PowerPoint	Critical and Creative Thinking Collaboration Communication

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About 5 weeks (Quarter 3)	W.7.1 W.7.2 W.7.6 W.7.7 W.7.8 W.7.9 SL.7.1 SL.7.2 SL.7.3 SL.7.4 SL.7.5 SL.7.6 RI.8.1 RI.8.2 RI.8.3 W.8.1 W.8.2 W.8.6 W.8.7 W.8.8 W.8.9	• Sort drugs into categories based on long and short term effects on the brain and body. • Explain the difference between physical dependence and psychological dependence for a variety of prescribed recreational drugs. • Explain the monetary and sociological ramifications of rampant drug abuse. • Run a variety of presumptive test to determine chemical makeup of an unknown substance	Drug Presentations Addiction and the Brain Video and Discussion Unknown Substances Labs 1 & 2 Blood and Urinalysis Lab Brine Shrimp Toxicology Lab Toxicology Test	Bertino and Bertino Chapter 9 Toxicology PowerPoint	
About 4 weeks (Quarters 3 & 4)	SL.8.1 SL.8.2 SL.8.3 SL.8.4 SL.8.5 SL.8.6 RI.9-10.1 RI.9-10.2 RI.9-10.3 RI.9-10.8 W.9-10.1 W.9-10.2 W.9-10.4 W.9-10.6	• Differentiate between the five manners of death, and mechanism of death. Be able to apply the correct terminology to a fictional descendent. • Explain how the different stages of decomposition help to break down the body. • Using a fictional descendent, explain the livor	Bertino and Bertino book activities 11-1, 11-2, & 11-4 Of Maggots and Murder Activity Entomology Investigation Lab Decomposition Lab	Bertino and Bertino Chapter 11 Saferstein Chapter 5 & 7 Genge pp. 124-134 Forensic Entomology	

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	W.9-10.7 W.9-10.8 SL.9-10.1 SL.9-10.2 SL.9-10.3 SL.9-10.4 SL.9-10.5 SL.9-10.6 RI.11-12.1 RI.11-12.2 RI.11-12.3 RI.11-12.8	mortis, algor mortis, stomach content, and eye changes that we would expect to see at differing times post mortem. • Explain why differentiation insects colonize a body at varying stages of decomposition. • Use larva to determine post mortem interval.	Turkey Carcass Decomposition Study Nature's Witness Lab Decomposition Final Project	PowerPoint	
About 2 weeks (Quarter 4)	W.11-12.1 W.11-12.2 W.11-12.4 W.11-12.6 W.11-12.7 W.11-12.8 SL.11-12.1 SL.11-12.2 SL.11-12.3 SL.11-12.4 SL.11-12.5 SL.11-12.6 **Ohio's Common Core State Standards - Science** 7.PS.1 7.PS.2 7.PS.3 7.PS.4 8.PS.1 8.PS.2	• Have a cursory understanding of gun safety. • Label the parts and use a variety of gun types. • Compare rifle patterns using a comparison microscope and match projectiles fired from the same weapon. • Explain how a scientist searches for gunshot residue on a suspect and victim.	Internet Ballistic Matching Activity Comparison of Bullet Casings Lab Firing Pin Matching Activity JFK Assassination Webquest Firearms Identification Shot in the Dark Lab SWAT Guest Speaker	Bertino and Bertino Chapter 17 Saferstein Chapter 9 Saferstein Appendix III Genge pp. 102-123 & 195-200 Ballistics PowerPoint	

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	8.LS.1 8.LS.2 8.LS.3		Ballistics Test		
About 3 weeks (Quarter 4)	PS.M.1 PS.M.2 PS.M.3 PS.M.4 PS.M.5 PS.EW.1 PS.EW.2 PS.EW.4 PS.EW.5 PS.FM.1 PS.FM.2 PS.FM.3 B.H.1 B.H.2 B.H.3 B.H.4 B.H.5 B.E.1 B.E.2	• Classify an impression as latent, plastic, or patent. • Be able to pour a mold to collect a variety of impression types. • Analyze the mold to identify the source of the impression. • Use an automobile database to identify a vehicle based on its measured wheelbase and tread width. • Measure and match discerning characteristics of a human bite to its source.	Bertino and Bertino book activities 15-1, 15-2, 15-3 & 15-5 Sealed with a Kiss Lab Bite Mark Impression Activity Parking Lot Investigation of Tire Tread Patterns Casting Impressions Questions	Bertino and Bertino Chapter 15 Saferstein Chapter 9 Saferstein Appendix V Genge pp. 58-73 Casts and Impressions PowerPoint	
	B.DI.1				
About 4 weeks (Quarter 4)	B.C.1 B.C.2 C.PM.1 C.PM.3 C.PM.4 C.PM.5 C.PM.6 C.IM.1 C.IM.2	• Use observation skills to evaluate a crime scene and recognize possible sources for DNA that should be collected properly and secured for testing. • Explain how to set up an electrophoresis gel.	Introduction to Fingerprints Lab DNA Detectives Bertino and Bertino book activities 7-2, 7-4, 7-5, 7-6, & 7-7	Bertino and Bertino Chapter 7 Saferstein Chapter 15 & 16	

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	ENV.ES.1 ENV.ES.5 ENV.ER.2 ENV.ER.3 ENV.ER.4 ENV.ER.5 PG.M.1 PG.M.2 PG..M.3 PG.M.4 PG.M.5 P.M.2 P.M.3 P.F.1 P.F.2 P.F.3 P.F.4 P.F.5 P.F.6 P.F.7 P.E.3 AP.LO.2 AP.LO.4 AP.SM.2 AP.T.1 AP.AE.1	• Analyze DNA fingerprints to determine if two sources are a match.	BCI Guest Speaker DNA Test	Genge pp. 142-158 DNA PowerPoint	