

<b>Grade &amp; Course:</b> Forensic Science		<b>Topic:</b> Unit 10 Forensic Anthropology	<b>Duration:</b> 2 Weeks
<b>Teachers:</b> Forensics Science Teachers			
<b>Georgia Standards and Content:</b> SFS5. Obtain, evaluate, and communicate information to Medicolegal Death Investigations. a. Ask questions to identify various causes and mechanisms of death (blunt force trauma, heart attack, bleeding, etc.). e. Plan and carry out an investigation to analyze height, sex, age, and race to develop an anthropological profile of the victim and potential perpetrator.			
<b>Narrative / Background Information</b>			
<b>Prior Student Knowledge: (REFLECTION – PRIOR TO TEACHING THE UNIT)</b> Students are familiar with how to collect biological evidence at a crime scene as well as crime scene procedures. Students should be well versed in using a microscope at this point in the course.			
<b>Year-Long Anchoring Phenomena: (LEARNING PROCESS)</b> An unidentified body was found in the back seat of a wrecked vehicle where the driver had fled the scene and the passenger was injured.			
<b>Unit Phenomena (LEARNING PROCESS)</b> A skull was found in Missouri at an old boy scout camp. Through forensic analysis the skull was determined to be that of Bun Chee Nyhuis, the scoutmaster’s wife.			
<b>Inquiry Statement:</b> With their training in archaeology, forensic anthropologists are knowledgeable about excavating buried remains.			
<b>Global Context:</b> Scientific and Technical Innovation			
<b>Science &amp; Engineering Practices:</b> <ul style="list-style-type: none"><li>Plan and Carry Out an Investigation</li></ul>	<b>Disciplinary Core Ideas: (KNOWLEDGE &amp; SKILLS)</b> <ul style="list-style-type: none"><li>History of Forensic Anthropology</li><li>Characteristics of bones</li><li>The search, collection, and documentation of skeletal remains</li><li>Forensic analysis of skeletal remains</li></ul>	<b>Crosscutting Concepts: (KNOWLEDGE &amp; SKILLS)</b> <ul style="list-style-type: none"><li>Patterns</li></ul>	
		<b>Key and Related Concepts:</b> <ul style="list-style-type: none"><li>Form</li><li>Patterns</li></ul>	
<b>Possible Preconceptions/Misconceptions: (REFLECTION – PRIOR TO TEACHING THE UNIT)</b> -There are clear differences between a male and female skeleton. - It is impossible to determine the race of skeletal remains. - DNA can be recovered from skeletal and dental remains. - We can only estimate age based on the size of the skeletal remains.			
<b>Key Vocabulary: (KNOWLEDGE &amp; SKILLS)</b>  -antemortem -biological profile -cartilage -diaphysis -DNA phenotyping -epiphysis -facial reconstruction			

- forensic anthropologist
- forensic anthropology
- growth plate
- joints
- ligaments
- ossification
- osteon
- osteoporosis
- perimortem
- postmortem
- prognathism
- skeletal trauma analysis
- superimposition
- suture marks
- tendons

#### **Inquiry Questions:**

##### **Factual -**

What bones are in the human body?

Which bones can be used to determine age of an individual?

Which bones can be used to determine the biological sex of an individual?

Which bones can be used to determine the ethnicity of an individual?

##### **Conceptual –**

How can the age of a bone be determined?

How is ethnicity determined based on bone shape and features?

How is anthropological evidence processed at a crime scene?

##### **Debatable -**

Can scientific methods to determine age ever be inaccurate?

		Summative assessment		
Unit Objectives:				
Learning Activities and Experiences	Inquiry & Obtain: (LEARNING PROCESS)	Evaluate: (LEARNING PROCESS)	Communicate: (LEARNING PROCESS)	
Week 1:	<p><b>Phenomenon:</b> A skull was found in Missouri at an old boy scout camp. Through forensic analysis the skull was determined to be that of Bun Chee Nyhuis, the scoutmaster’s wife.</p> <ul style="list-style-type: none"><li>● Anthropology Notes</li><li>● Bone sample analysis stations lab (This old bone lab with Who</li></ul>	Bone sample analysis stations lab (This old bone lab with Who owns these bones Stations Lab) DAY 2		

	owns these bones Stations Lab) DAY 1		
Week 2:		Review and Unit Assessment	
<b>Resources (hyperlink to model lessons and/or resources):</b> <ul style="list-style-type: none"> <li>• Textbook Forensic Science Bertino &amp; Bertino, 3rd Edition</li> <li>• Forensic Science Schoology Course</li> <li>• Additional resources can be found in the common Schoology group under the Unit 10 folder.</li> </ul>			
<b>Reflection: Considering the planning, process and impact of the inquiry</b>			
Prior to teaching the unit		During teaching	After teaching the unit
			(click here)