



PLTW Virtual Learning

# Medical Detectives

## Lesson 33

May 20, 2020



# **7 & 8 Grade Medical Detectives**

## **Lesson: Solving Mysteries as a Forensic Anthropologists,**

### **May 20, 2020**

**Objective/Learning Target:**  
**Lesson 33, Part 3**

**Students will learn how forensic anthropologists solved a young boy's mystery death more than 400 years ago.**

**Disclaimer: Forensic Anthropologists work with human skeletons to solve crimes and mysteries. If you find this upsetting, in any way, please do not proceed with this lesson.**

## Warm-Ups:

What did you learn in the 400-year-old mystery of Captain Gosnold?

1) What do forensic anthropologists need to have, besides DNA, to identify a skeleton that is hundreds of years old? Did you read the information on the slide **Extend Your Knowledge**? What did you find out? If not, you may want to go back and read it.

1) How was the mystery solved?

Take a minute to answer your questions.

[One-Minute Timer](#)



# Lesson Introduction/Background Information:

As a forensic anthropologist, are you ready to solve another mystery?

The First Fatality?

Cause of Death - Arrowpoint or Chipped Tooth?

Two colonists, Captain John Smith and Captain Gabriel Archer, wrote that a young Englishman died during an American Indian attack in 1607, only two weeks after they landed on the island.

"[The Indians] had ent'red the fort with our own men, which were then busied in setting corn ... in which conflict most of the council was hurt, a boy slain ... "

- John Smith, A True Relation of such occurrences and accidents of note as hath happ'ned in Virginia, 1608



<https://naturalhistory.si.edu/education/teaching-resources/written-bone/forensic-case-files/first-fatality>

# Practice:

## The Discovery

In August 2005, excavators discovered a skeleton inside the Jamestown Fort, along the western palisade wall. Clues indicated the burial took place during the first weeks or months of settlement at Jamestown. Though Smith and Archer did not name him, this skeleton found in James Fort may tell his story. His bones – and a stone arrowpoint – survived to reveal details of his short life and violent death. Was this the colony's first fatality?



James Fort skeleton JR1225B, in situ/Skeleton of a male, 14 to 15 years old, with a small stone arrowpoint. Credit: APVA Preservation Virginia/Historic Jamestowne. Photo courtesy of Chip Clark.

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# Practice:

## Evidence at the Scene

Clues in the burial tell a tense story. This boy was buried hastily. The grave was poorly dug and too short for his body. His right collarbone was broken near the time of death, likely during the attack. Irregular positioning of the right arm reflects this injury and hasty placement of the body in the grave. The arrow point was not embedded in the femur but would have been lodged in the tissue of his left leg. His feet and legs remained together, once held in place by a loose shroud. The lack of any European artifacts in the soil shoveled back into the grave indicates that the burial took place during the settlement's first weeks or months.

Teeth from the James Fort skeleton JR1225B. Credit: APVA Preservation Virginia/Historic Jamestowne. Smithsonian photo

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# Self Assessment:

A quick death might have been a blessing. Piecing his bones together, scientists saw that this boy had an infection that had spread from a broken, abscessed tooth into his lower jaw bone. His weakness made him especially vulnerable.

Even if the arrow had not wounded him, the infection of this boy's jaw would have eventually killed him as it spread throughout his body. As pus drained into his mouth, he would have had trouble eating and experienced terrible pain. The extent of the injury suggests that he broke a tooth before leaving England. The tooth could have been extracted, but he received no dental care, which would eventually cause his death.

Questions:

1. How did you think the boy died?
2. Did you agree with the outcome?
3. Did you know that someone can die from an abscessed tooth?
1. Why do you think the scientists speculated he could have been the first settler to die?



<https://naturalhistory.si.edu/education/teaching-resources/written-bone/forensic-case-files/first-fatality>

# Extend Your Learning/Continued Practice:

The information for Lessons 31-35 are coming from the Smithsonian Institute's special exhibit through 17th century history.

Written in Bone was a popular exhibit in the Museum for almost five years (February 7, 2009 to January 6, 2014); this website was developed originally to enhance the information available in the exhibit and continues as a freestanding entity now that the exhibit is closed.

This site examines history through 17th-century bone biographies, including those of colonists teetering on the edge of survival at Jamestown, Virginia, Maryland colonists living in the wealthy and well-established settlement of St. Mary's City, farmers located in Leavy Neck in Anne Arundel County, and African slaves and European immigrants living in other locations in the Chesapeake Bay area. Scientists affiliated with these projects worked with Smithsonian anthropologists in the development of the original exhibit and this website. Go to the following website to read more --

<https://naturalhistory.si.edu/education/teaching-resources/written-bone>

