



PLTW Virtual Learning

Medical Detectives

Lesson 22

May 5, 2020



7 & 8 Grade Medical Detectives Lesson: May 5, 2020

**Objective/Learning Target:
Lesson 22, Part 7**

Students will be able to explain the different types of evidence forensic scientists use and be able to solve a mystery crime.

Disclaimer: This lesson is optional for anyone who is uncomfortable with this topic.

Warm-Ups:

Quick Write:

****With the information you've learned in the last six lessons about forensic scientists and how they solve crimes, it's time to put your detective skills to work.**

****What steps would you as a forensic scientist use to solve a crime scene investigation.**

(List at least 4 steps)

- 1.
- 2.
- 3.
- 4.

Take a minute to write WHAT YOU KNOW!

[One Minute Timer](#)



Lesson Introduction/Background Information:

Review the previous six lessons where you learned about forensic science and the different lab tests used to solve crime investigations:

1. DNA extraction lab -- DNA evidence and how it's used to solve crimes
2. Electrophoresis virtual labs -- what it is and how it's used
3. Forensic Science and DNA profiling -- can it get a verdict?
4. Different types of evidence used to solve crimes -- including insects
5. Interactive forensic pathologist autopsy
6. Blood Typing Virtual Lab and solving crimes

Can you share one take away from each of these lessons?



Practice:

Watch the Youtube video [Crime Scene Investigation \(CSI\) Techniques](#) about Texas Rangers and how the forensic scientists investigate a crime scene.

After watching the video, write down the seven steps the Texas crime investigators followed:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.



Practice:

Crime 360 - Behind the Scenes with 3-D Imaging

What is 3-D Imaging and how can it help to solve a crime?

How can it be used to help solve a cold case, a case that is several years old, sometimes as much as 20 to 40 years old?

Self Assessment:

Solve the mystery crime, My Twin Did it, below:

Disclaimer: This video is optional for anyone who is uncomfortable with this topic.

Watch the video [My Twin Did It](#), stop the video at exactly .50 seconds and answer the following questions:

1. Donald says he did not commit the crime but says it's his identical twin Ronald, is this possible? Explain your answer.
2. Is there anything that can be used as evidence to prove this? Explain your answer.
3. Click on the video, finish watching it and answer the remaining questions.
4. What did forensic scientists use to solve the identity of the criminal?
5. What other forms of evidence could have been used to help solve this mystery?

Extend Your Learning/Continued Practice:

Is this something you might be interested in? Check it out.

[Crime Scene Investigation: Simulation Lab](#)



Answer Key:



Practice Answer Key:

1. Video Taping
2. A multitude of still photographs
3. Using an alternate light source
4. Using markers to measure to scale
5. Creating a diagram using correct measurements to scale
6. Obtaining all DNA and fingerprints at the crime scene.