

Chapter 2: Crime-Scene Investigation and Evidence Collection: 2-8d Chapter 2 Review  
Book Title: Forensic Science: Fundamentals and Investigations  
Printed By: Jack Waddell (waddelljn@santarosa.k12.fl.us)  
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## Chapter Review

### 2-8d Chapter 2 Review

#### Multiple Choice

1. Locard's Principle of Exchange implies all of the following except Obj. 2.1 - Summarize Locard's Principle of Exchange.
  - a. Fibers can be transferred from one person to another.
  - b. Blood spatter can be used to identify blood type.
  - c. Cat hair can be transferred to your pants.
  - d. Soil samples can be carried from the yard into your home.
2. The reason it is important to separate the witnesses at the crime scene is to Obj. 2.5 - Summarize the seven steps (seven S's) of a crime-scene investigation. 2.6 - Explain the importance of securing the crime scene.
  - a. prevent contamination of the evidence
  - b. prevent fighting among the witnesses
  - c. prevent the witnesses from talking to each other
  - d. protect them from the perpetrator

3. Correct collection of evidence requires which of the following? Obj. 2.8 - Demonstrate proper technique in collecting and packaging trace evidence.
- a. documenting the location where the evidence was found
  - b. correct packaging of evidence
  - c. maintaining proper chain of custody
  - d. all of the above
4. A crime-scene sketch should include all of the following except Obj. 2.5 - Summarize the seven steps (seven S's) of a crime-scene investigation. 2.7 - Identify the methods by which a crime scene is documented.
- a. a distance scale
  - b. date and location of the crime scene
  - c. a north heading
  - d. the type of search pattern used to collect the evidence

### Short Answer

5. Blood type is considered to be class evidence. Although it may not specifically identify the suspect, explain how it still could be useful in helping to investigate a crime. Obj. 2.3 - Distinguish between direct and circumstantial evidence.
6. The recorder at the crime scene needs to work with all of the police personnel at the crime scene. What type of information would the recorder need to obtain from each of the following persons? Obj. 2.4 - Identify the types of professionals who might be present at a crime scene. 2.7 - Identify the methods by which a crime scene is documented.

- a. first-responding officer
  - b. photographer
  - c. sketch artist
  - d. evidence collection team
7. When the crime-scene investigators arrive at a potential homicide scene, one of their duties is to collect evidence from the victim's body. However, some evidence needs to be collected from the body at a later time in the morgue. For each type of situation listed, describe the type(s) of evidence that could be obtained by: Obj. 2.6 - Explain the importance of securing the crime scene., 2.7 - Identify the methods by which a crime scene is documented., 2.8 - Demonstrate proper technique in collecting and packaging trace evidence., 2.9 - Explain what it means to map a crime scene.
- a. transporting the body in a closed body bag
  - b. taking nail clippings from the deceased
  - c. placing a plastic bag over the hands of the deceased before transporting the person's body to the morgue
  - d. brushing the clothing of the victim with a clothes brush
8. Identify the errors in each of the following cases: Obj. 2.5 - Summarize the seven steps (seven S's) of a crime-scene investigation., 2.7 - Identify the methods by which a crime scene is documented., 2.8 - Demonstrate proper technique in collecting and packaging trace evidence., 2.9 - Explain what it means to map a crime scene.

### Case 1

A dead body and a gun were found in a small room. The room was empty except for a small desk and a chair. The room had two windows, a closet, and a door leading into a hallway. The crime-scene sketch artist measured the perimeter of the room and drew the walls to scale. He sketched the approximate position of the dead body and the gun. He sketched the approximate location of the chair and the desk. What did he forget to do?

### **Case 2**

At the scene of the crime, the evidence collector found a damp, bloody shirt. The evidence collector quickly wrapped the shirt in a paper bundle. He inserted the paper bundle with the shirt into an evidence bag. The bag was sealed with tape, and the collector wrote his name across the tape. The CSI also picked up three cigarette butts and put them into a plastic evidence bag, which he sealed and labeled. An evidence collection log was completed and taped to each of the evidence bags. What did he do incorrectly?

### **Case 3**

*Several different labs often need to share a small amount of evidence. It is important that the chain of custody be maintained. If the chain of custody is broken, then the evidence may not be allowed in a court proceeding. Identify the break in the following chain of custody.*

After obtaining evidence, a lab technician removed the tape that contained the signature of the crime-scene evidence collector. Upon completion of her examination of the evidence, the lab technician put the evidence back into a paper bundle, and inserted the bundle into an evidence bag. The technician resealed the bag in the same place as the original crime-scene investigator. After carefully sealing the bag, the lab

technician signed her name across the tape. She completed the chain-of-custody form on the outside of the evidence bag and brought the evidence to the next lab technician at the crime lab.

9. Analyze the JonBenet Ramsey case described in the beginning of the chapter.

- a. The crime-scene investigators who first arrived at the scene had a preconceived idea that JonBenet was kidnapped. Describe how important evidence may have been lost or destroyed because they assumed they were investigating a kidnapping as opposed to a murder. Obj. 2.5 - Summarize the seven steps (seven S's) of a crime-scene investigation., 2.6 - Explain the importance of securing the crime scene.
- b. Describe how the father's actions upon finding the body resulted in a loss of evidence and/or contamination of the evidence. Obj. 2.6 - Explain the importance of securing the crime scene.

10. Refer to the case study of the Atlanta Child Murders as you answer the following questions.

- a. Describe the direct evidence linking Wayne Williams to the crimes. Obj. 2.2 - Identify four examples of trace evidence., 2.3 - Distinguish between direct and circumstantial evidence.
- b. What type of circumstantial evidence linked Wayne Williams to the crimes? Obj. 2.2 - Identify four examples of trace evidence., 2.3 - Distinguish between direct and circumstantial evidence.
- c. Using specific examples from the Wayne Williams case, explain how crime-scene investigations can use information obtained from manufacturers when evaluating evidence. Obj. 2.9 - Explain what it means to map a crime scene.

11. A suspect is linked to a murder by the presence of hair found on a chair at the victims' house and a fingerprint found on the coffee table. Crime-scene investigators found a fingerprint consistent with a suspect's fingerprint, and they found the hair to be similar to the hair from the head of the same suspect. Provide arguments that this evidence is not sufficient to prove the suspect was the murderer. Include the following terms in your answer: Obj. 2.1 - Summarize Locard's Principle of Exchange., Obj. 2.2 - Identify four examples of trace evidence., 2.3 - Distinguish between direct and circumstantial evidence.

- Circumstantial evidence
- Class evidence
- Individual evidence
- Direct evidence

### Going Further

12. Research cases where evidence was thrown out or declared inadmissible due to errors made by CSI personnel. Your sources can be TV programs, actual cases, or creative writing.
13. Research the role of a grand jury in criminal investigations.

## Bibliography

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### **Internet Resources**

Byrd, Mike. “Proper Tagging and Labeling of Evidence for Later Identification,” [www.crime-scene-investigator.net](http://www.crime-scene-investigator.net)

Hencken, Jeannette. “Evidence Collection: Just the Basics,” [www.theforensicteacher.com](http://www.theforensicteacher.com)

Ruslander, H. W., S.C.S.A. “Searching and Examining a Major Case Crime Scene,” [www.crime-scene-investigator.net](http://www.crime-scene-investigator.net)

Schiro, George. "Collection and Preservation of Evidence," [www.crime-scene-investigator.net](http://www.crime-scene-investigator.net)

[www.howstuffworks.com](http://www.howstuffworks.com) forensics links or How Stuff Works podcasts, including.

How Crime Scene Clean-up Works

How Crime Scene Investigation Works

How Locard's Exchange Principle Works

Also check state police Websites for evidence-handling guides.

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