Chapter 2

Crime Scene Investigation & Evidence Collection
HOW OUR MINDS CAN DO AMAZING THINGS! IMPRESSIVE THINGS! IN THE BEGINNING WAS HARD BUT NOW, ON THIS LINE YOUR MIND IS READING 17 SUBJECTS LLY W17H0U7 3V3N 7H1NK1NG 4B0U7 17, BE PROUD! ONLY C3R741N P30PL3 C4N R3AD 7H15. R3 P057 1F U C4N R35D 7H15.
Ch. 2 Crime Scene Investigation and Evidence Collection

By the end of this Chapter you will be able to:

- Summarize Locard’s exchange principle
- Identify four examples of trace evidence
- Distinguish between direct and circumstantial evidence
- Identify the type of professionals who are present at a crime scene
- Describe how evidence from a crime scene is analyzed
Summarize the three steps of a crime scene investigation
Explain the importance of securing the crime scene
Identify the methods by which a crime scene is documented
Demonstrate proper technique in collecting and packaging trace evidence
The Goal of Crime-Scene Investigation

To recognize, document, and collect evidence at the scene of a crime.
What is a crime?

Crime – An offense against the public at large, proclaimed in a law and punishable by a governing body.

Criminal Law – The body of law that, for the purpose of preventing harm to society defines what behavior is criminal and prescribes the punishment to be imposed for such behavior
Court Roles

**Plaintiff**
- Accuser
- Could be the gov’t, or a person, or a business

**Defendant**
- Accused party
- Could be the gov’t, or a person, or a business

**Prosecutor**
- Lawyer for accuser

**Defender**
- Lawyer for the accused
Classification of Crimes

- **Felony** – A relatively serious criminal offense punishable by death or imprisonment for more than a year in a state or federal prison

- **Misdemeanor** – A less serious crime that is generally punishable by a prison sentence of not more than one year in a county or city jail
Criminal Investigation

The **lawful search** for people and things to reconstruct the circumstances of an illegal act, apprehend or **determine** the guilty party, and aid in the state’s **prosecution** of the offender(s).
Deductive vs. Inductive Reasoning

- Deductive Reasoning:
  - The **drawing of conclusions** from logically related events or observations
Deductive vs. Inductive Reasoning

- Inductive Reasoning: The making of inferences from apparently separate observations or pieces of evidence.
The Scientific Method

• Formulate a **question** worthy of investigation.
• Formulate a **reasonable hypothesis** to answer the question.
• **Test** the hypothesis through **experimentation**.
• Upon **validation** of the hypothesis, it becomes suitable as scientific evidence.
Locard’s Exchange Principle

- When a person comes in **contact** with an object or another person, material can be **transferred**.
- More **intense** interactions result in **greater** exchange.
- Transferred material is known as **trace** evidence.
Types of Evidence

- **Direct evidence** – **Firsthand observations**
  - Examples: eyewitness accounts, video, etc.

- **Circumstantial evidence** – **Indirect**
  - Physical or biological evidence that can link a person to a crime, but don’t directly prove guilt.
    - Physical examples: bullets, weapons, fibers, tool marks, etc.
    - Biological examples: body fluids, hair, plant parts, etc.
Types of Evidence

Evidence

Direct

Circumstantial

Physical

Biological
Explain why this would be or would not be trace evidence
Types of Evidence

- **Class evidence** – narrows an identity to a group of persons or things.
  - Example: Paint chip from a blue 1987 Toyota.

- **Individual evidence** – narrows an identity to a single person.
  - Example: DNA sample
The Crime-Scene Investigation Team

Who is at the crime scene?

- Police and ...
- District attorney (possibly)
- Crime scene investigators
- Medical examiners
- Detectives
- Specialists
The Seven S’s of Crime Scene Investigation

1. **Securing the Scene**
   - Responsibility of the *first responder*
   - **Restricts** entrance to scene
   - Starts log of all persons entering
   - May send for additional experts or officers
The Seven S’s of Crime Scene Investigation

2. **Separate** and question the witnesses
   - **When** did the crime occur?
   - Who called it in?
   - **Who** is the victim?
   - Can the perpetrator be identified?
   - What did you see happen?
   - Where were you when you observed the crime scene?
3. **Scanning the Scene**

- Determine where photos should be taken
- Determine if the location is a **primary** crime scene (where the crime occurred), or a **secondary** location (such as where a body was **moved**).
4. Seeing the Scene

- Take photos, including close-up pictures with and without rulers for scale.
The Seven S’s of Crime Scene Investigation

5. Sketching the Scene

- Drawn to scale
- All objects should be measured from two immovable objects
- Direction of North should be included
- Scale of drawing, date, and location should be included.
Crime Scene Sketch Form

Scale: \( \frac{1}{4}'' = \) _____ feet

Case number ______________
Date ______________
Location ______________
Name ______________
The Seven S’s of Crime Scene Investigation

6. **Searching** for Evidence-
   - Tools such as flashlights, UV lights, or vacuums may be used.
   - Investigators **walk patterns** to avoid missing anything
Search Patterns

Figure 2. Crime scene search patterns. Reference: Saferstein, Criminalistics
The Seven S’s of Crime Scene Investigation

7. Securing and Collecting Evidence –
   - Liquids and arson remains are stored in airtight, unbreakable containers.
   - **Biological** evidence is placed in a breathable container to dry.
After drying, biological evidence is transferred to a **paper bindle** and sealed in a bag.
Packaging the Evidence

1. Crease a clean paper and place evidence in the X position
2. Fold in the left and right sides, and then fold in the top and bottom
3. Put the bindle into a plastic or paper evidence bag affixing a seal over the opening
4. Write your name on the seal
Each different item or similar items collected at different locations must be placed in separate containers. Packaging evidence separately prevents damage through contact and prevents cross-contamination.
Chain of Custody—A list of all persons who came into possession of an item of evidence.

Continuity of possession, or the chain of custody, must be established whenever evidence is presented in court as an exhibit.
This means that every person who handled or examined the evidence and where it is at all times must be accounted for. Maintaining a chain of custody log is essential to present credible evidence in court.
1. Bag the evidence
   Add identification
   Seal it
   Sign it across the sealed edge

2. Sign over to a lab technician
   Open bag on non-sealed edge

3. Return items to the evidence bag
   Seal evidence bag in another bag
   Sign the evidence log
Evidence ID Forms

Evidence

Case # ___________________  Inventory # ________________

Item #  Item description

__________  _____________________________________________

__________  _____________________________________________

__________  _____________________________________________

Date of recovery ___________  Time of recovery ___________

Location of recovery _______________________________________

Recovered by _____________________________________________

Suspect _________________________________________________

Victim _________________________________________________

Type of offense __________________________________________

Chain of custody

Received from ___________________  By ___________________  AM or PM
Date ___________  Time ___________  AM or PM

Received from ___________________  By ___________________  AM or PM
Date ___________  Time ___________  AM or PM

Received from ___________________  By ___________________  AM or PM
Date ___________  Time ___________  AM or PM

Received from ___________________  By ___________________  AM or PM
Date ___________  Time ___________  AM or PM
After a crime-scene investigation, forensic lab work begins.
Test results lead to a crime scene reconstruction.
Test results can be used to identify staged crime scenes.
Facts result from collected evidence processed by the forensic lab.

Lead detective aims to see how facts fit into the crime scenario.
Lab results can:

- Show **reliability** of witness accounts
- Establish the **identity** of suspects or victims
- Show suspects to be **innocent** or **link** them with a scene or victim
Crime Scene Reconstruction

Crime scene reconstruction involves:

- Forming a hypothesis of the **sequence** of **events** from before the crime was committed through its commission
Staged Crime Scenes

When lab results don’t match up with the testimony of witnesses

**Common examples:**

- Staging a fire—to cover bankruptcy
- Staging a suicide—to cover a *murder*
- Staging a burglary—to collect insurance money
Was the crime scene staged? Consider:

- Does the type of wound match the weapon?
- Could the wound be easily self-inflicted?
- What were the mood and actions of the victim before the event?
- What were the mood and actions of the suspect before the event?