Module 3

Crime Scene Investigation

Forensic Science Teacher Professional Development

Sam Houston State University
A Member of The Texas State University System

Overview

Unit 1: PROCESSING THE SCENE

Module 3A

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2. The nature of physical evidence
3. Goals and objectives of processing the crime scene

Module 3B

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        4. Quadrant search
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Overview - continued

Unit 1: Processing the Scene – continued

Module 3C

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Module 3D, 3E

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Overview – continued

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Module 3F

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Module 3A

Introduction to Crime Scenes

Forensic Science Teacher Professional Development

Unit 1.1 Introduction

- Crime scene processing is a task associated with criminal investigations.
- The purpose of crime scene investigations is to recover physical evidence and document all the information related to the crime scene processing.
- Through the provision of objective data, crime scene processing allows the crime scene technician to test investigative theories and corroborate testimonial evidence in court.
- Ultimately, a crime scene investigation can be described as the search for the truth.

Unit 1.1 Introduction

- The definition of evidence is “anything that tends to prove or disprove a fact in contention.” There are two types of evidence: testimonial and physical.

- Testimonial evidence is information obtained through oral statements of suspects, victims, and witnesses. Physical evidence pertains to the broad category of material objects through which the crime was committed. Physical evidence may manifest itself in what are known as different effects. We can classify the effects as the following:

Unit 1.1 Introduction

- Predictable effects: These are changes to the scene or to the evidence that happen in a regular way; for example, the succession of different insects into a dead body (entomology), the changes in rigidness of a corpse (rigor or livor mortis), and the change of temperature of a body after death (to determine the time of death).

- Unpredictable effects: These are changes that occur in the crime scene in an unexpected way; for example, the disturbance produced to the crime scene by the actions of the emergency team, firemen, or just by the entry of the police.

Unit 1.1 Introduction

- Transitory effects: These include changes that are fragile and will be destroyed by time or the environment. These effects must be recorded immediately after entering into the crime scene. Examples of transitory effects would be a cigarette burning, chemical or cologne odors, etc.

- Relational details: This is evidence that enables an investigator to physically connect different items to the scene. For example, bloodstain void patterns can indicate the location or position of a body, gunshot wounds and/or a cluster of shells can indicate a gun was used, etc.

Unit 1.1 Introduction

- Functional details: This refers to the operating condition of items relevant to the scene (i.e., what was possible or impossible for that item to accomplish). An example of a functional detail would be a gun operating in a normal fashion or a clock alarm set for a specific time.

  - When we are searching for physical evidence there are three questions that we need to formulate:

    - What is it and what function did it have in the scene?

    - What is the relationship between it and any other items of evidence and to the whole scene itself?

    - What information does it give us about timing and sequencing aspects?

Unit 1.1 Introduction

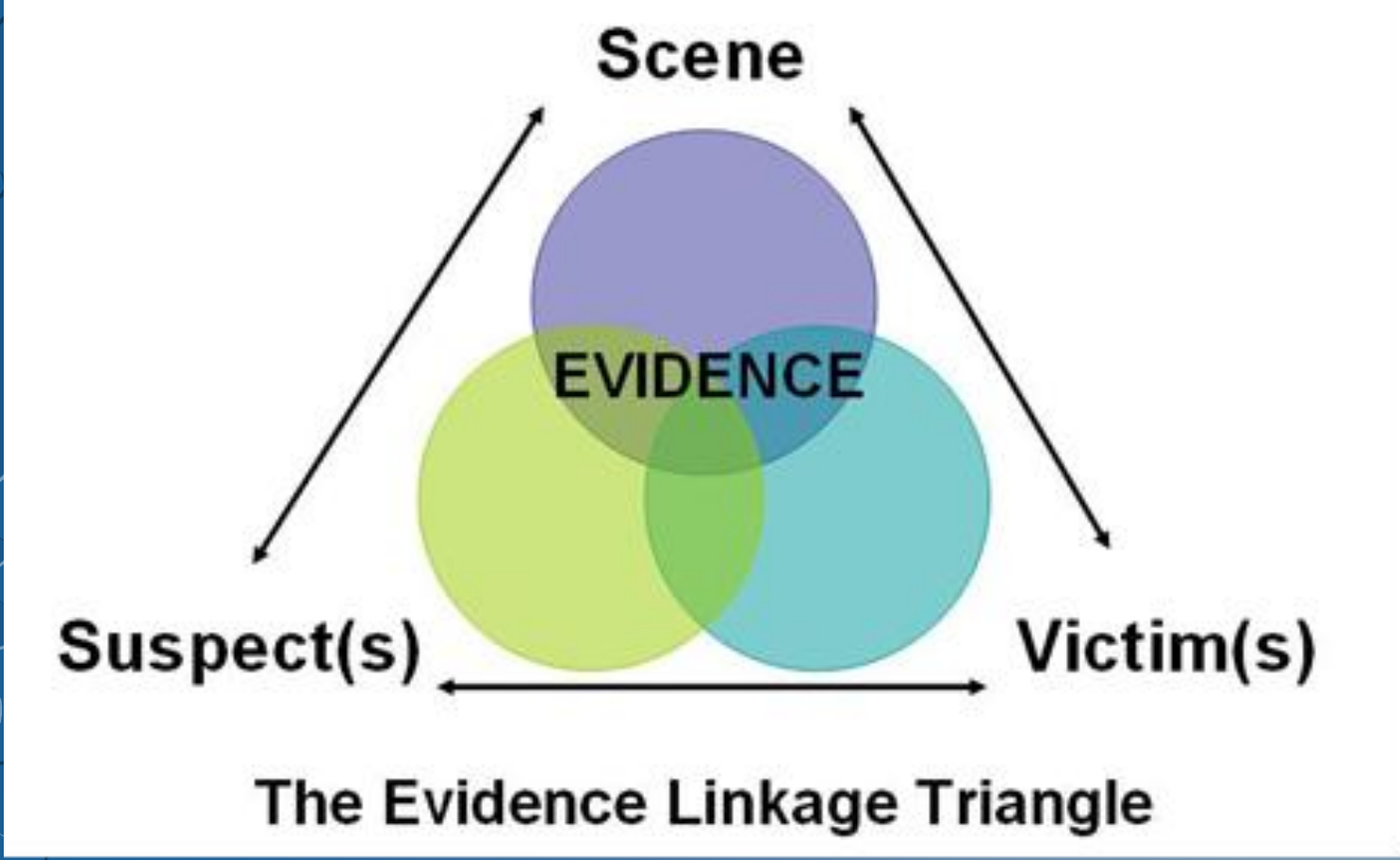

Figure 1. Evidence Linkage Triangle

Unit 1.1 Introduction

- Processing a crime scene is not a trivial task for a technician. Crime scene processors are not merely “trash collectors.”

- There are critical features that a technician should possess to accomplish the objectives of the crime scene processing. To understand the interpretive value of evidence, we need to consider the evidence linkage triangle. Three entities are involved: the scene, the suspect(s), and the victim(s). Functionally, it is the interpretation of the physical evidence that may connect these three entities.

Unit 1.1 Introduction

There are critical features that a technician should possess to accomplish the objectives of crime scene processing.

1) Knowledge: It is critical that the technician understand what he or she is looking for; he or she must seek the interpretive value of the evidence.

2) Skills and Tools: The technician must be very competent with all the equipment required to process and document the scene. He or she must be very familiar with the use of the camera equipment. During the processing is not a good time to start reading the manual about how to use the camera.

Unit 1.1 Introduction

3) A methodological approach: The technician must use a method that is all encompassing and purposely regular.

4) Flexibility: Every crime scene is unique. This is why a technician needs to maintain the flexibility to use a different approach for each crime scene depending on the conditions and the type of crime. This is critical, for example, in the case of finding fragile evidence.

5) A coordinated effort: The technician must have knowledge of the responsibility of each member of the team.

Unit 1.1 Introduction

There are certain issues related to the integrity of the crime scene that need to be considered when a scene is going to be processed:

- Addition of material to the scene
- Destruction of material at the scene
- Movement of material at the scene

Unit 1.2 The Nature of Physical Evidence

Before a technician can successfully conduct a search for evidence, it is very important the technician knows for what he or she is searching.

Laboratory technicians and crime scene technicians, respectively, are sometimes referred to as “lab rats” and “field mice.”

- Without the lab work, analysis, and results, many specific details about the evidence cannot be identified.
- Without a good scene processing, not enough quality evidence could be analyzed by the laboratory.

Quality work on the part of these two teams is essential to a successful investigation.

Unit 1.3 Goals and Objectives of Processing the Scene

- Crime scene investigation is the process by which investigators seek to answer basic questions, including the following:

  - What happened?
  - Did all events of the crime occur within the scene?
  - Who was at the scene?
  - When was the crime scene created?
  - How was the crime scene created?

Unit 1.3 Goals and Objectives of Processing the Scene

Crime scene investigators establish the facts by being objective and pursuing the truth. The goal of processing the scene is to collect the maximum amount of information while minimizing disturbance. Investigators use six steps to achieve this:

1) Assessment
2) Observation
3) Documentation
4) Systematic searches
5) Evidence collection
6) Evidence analysis

Unit 1.3 Goals and Objectives of Processing the Scene

1) Assessment is conducted before any other actions are performed and is an ongoing process throughout the crime scene investigation. The scene is initially assessed to determine its size, complexity, personnel requirements, and security risks.

2) Observation is also an ongoing process throughout the investigation.

Unit 1.3 Goals and Objectives of Processing the Scene

3) Documentation of the scene is the recording of the investigator's observations. It includes photography, video recording, notes, case reports, sketches, and mapping.

4) Systematic searches are conducted to locate and collect physical evidence. The search begins with a minimally intrusive visual search and uses progressively intrusive search techniques as the investigation continues.

Unit 1.3 Goals and Objectives of Processing the Scene

5) Once the search is conducted and physical evidence is located, the collection of the physical evidence is performed by a variety of methods (to be discussed later).

6) The collected physical evidence is submitted to the appropriate laboratory to be analyzed and interpreted for its significance to the case.

End of Module 3A

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