Lesson 2

Securing and Recording a Crime Scene

Reading Preview

Key Concepts

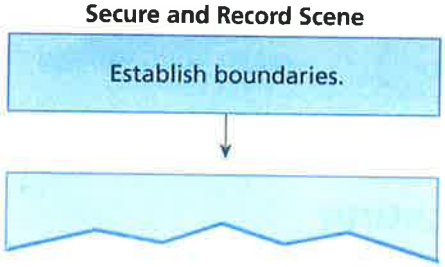
- How do police secure a crime scene?
- What methods do investigators use to record a crime scene?

Key Terms

- sketch
- scale
- communicating

Target Reading Skill

Sequencing As you read, make a flowchart that shows the steps for securing and recording a crime scene. Place each step in a separate box in your flowchart.



Discover Activity

How Many Footsteps?

1. Observe three classmates walking from the doorway of your classroom to their desks. Count and record the number of steps each classmate takes.
2. Add up the total number of steps and divide by three to get an average number of steps from the doorway to a desk.
3. Also, record the number of students in your class.

Think It Over

Calculating You are investigating a crime scene in a room the size of your classroom. Estimate how many total footsteps your classmates would make if each person walked through the crime scene once. Then think of two ways you could reduce the total number of footsteps.

The fictional detective Sherlock Holmes understood forensic science. In one story, Holmes is examining the scene of a murder. He looks at the trampled grass at the scene and gets angry. "Oh, how simple it would all have been had I been here before they came like a herd of buffalo and wallowed all over it," he exclaims. "Here is where the party with the lodge-keeper came, and they have covered all tracks for six or eight feet round the body."

Modern crime scene investigators would understand how Holmes felt. They often face the same problem. Too many people at a crime scene are like a "herd of buffalo." They trample on evidence. They walk over footprints or fragile traces of evidence. They may leave fingerprints. They interfere with the important first steps in investigating a crime.

Sherlock Holmes in a scene from "The Boscombe Valley Mystery," written by Sir Arthur Conan Doyle in 1891

Securing a Crime Scene

In many TV shows, crime scenes are busy places. They are filled with detectives and officers in blue uniforms. Curious neighbors gather around. But a crime scene is no place for a crowd.

Sometimes people must rush into a crime scene to save a life or keep a suspect from escaping. These acts are necessary even if they disturb the scene and damage evidence. Afterward, the police must secure the site to prevent more damage. **Two ways to make a crime scene secure are to establish clear boundaries and limit entry to the crime scene.**

FIGURE 8
Sealing a Crime Scene
These police are using yellow tape to seal off a crime scene.

Establish Boundaries Figure 8 shows the most common way to protect a crime scene. The police are using bright yellow "crime scene" tape to mark the boundaries of the scene. Police may also use ropes, orange traffic cones, or parked police cars to seal off the area. It helps if there are natural boundaries at the scene, such as fences, gates, and doors.

If the crime scene is indoors, police place a seal on windows and doors. Those actions warn people who are not part of the crime scene team to stay out. Officers may be posted at the scene to make sure that no one ignores the warning.

Police commonly tape off an area larger than the crime scene itself. This keeps reporters and other people away from the crime scene. It also provides a place to park official vehicles, talk with witnesses, and meet with other team members.

Control Entry People who walk through a crime scene can leave objects, such as hairs, behind by accident. These objects can cause confusion later when the team collects and tests evidence. So police may map out a single path for people to use as they come and go. They also keep a record, or log, of all visitors.

Reading Checkpoint **Why do police tape off an area larger than the actual crime scene?**

Long Range These photographs provide an overview, or "big picture," of a crime scene.

Medium Range These photographs focus on locations where there are pieces of evidence.

FIGURE 9

Types of Photographs

These photographs are views of the Bethesda Fountain in Central Park in New York City.

Observing *How can you tell that these photographs were not taken at a crime scene?*

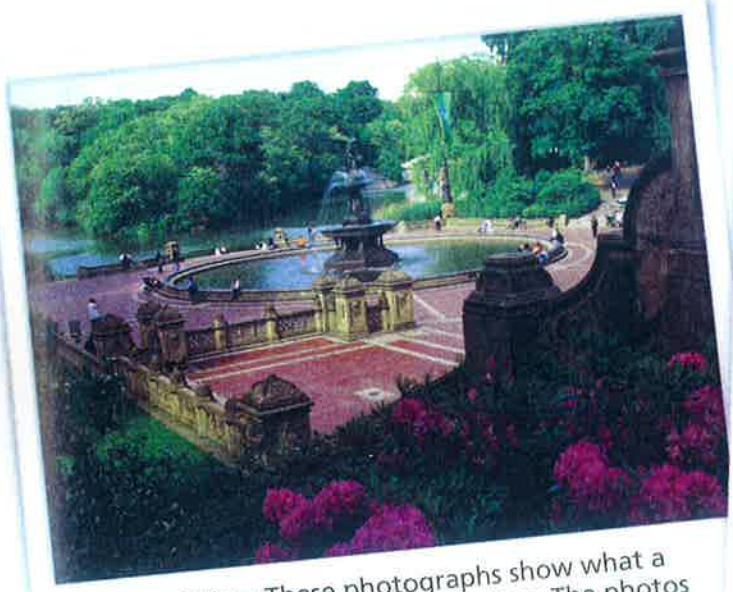
Recording a Crime Scene

At last, the crime scene is secure. The chief investigator can do a "walk-through" of the area with other team members. The team needs to look at the "big picture" before they make a detailed record of the crime scene. It is important to have a record of the scene before any evidence is removed. **Investigators can use photographs, videos, sketches, and notes to make a record of a crime scene.**

Photographs Investigators take photographs to make a visual record of the crime scene. The team will refer to the photographs as they investigate the crime. They may notice a detail that didn't seem important at the start. Or they may check to see if their memories of the crime scene are accurate.

Photographs can also record evidence that is likely to be destroyed. When snow melts, footprints in the snow disappear. Rain may start to fall, washing away traces of evidence. Some crime scenes, such as a busy street, cannot easily be sealed off for long periods. In cases like those, photographs can show what conditions were like when the investigators arrived at the scene.

Showing what the crime scene looked like is also important during a trial. Trials often take place years after a crime happens. Photographs are used to show the crime scene as it looked at the time of the crime. With photographs, people in the courtroom can see where the evidence being presented was found at the crime scene.



Point of View These photographs show what a witness might see from this location. The photos can support or oppose the statement of a witness.

Close-ups These photographs focus on the details of evidence. Close-ups are taken from the side and from above.

Photographs are classified as long range, medium range, point of view, and close-ups. In some close-ups, a ruler is placed next to the object. The photographer can use the photo with the ruler to make a print of the object at its actual size. Figure 9 shows an example of each type of photograph.

The type of camera used at the crime scene is important. With a digital camera, photographers can see right away if they got the right image. Also, the photos can be quickly stored in a computer. They don't need to be sent to a photo lab. On the other hand, it is easy to alter the images with a computer. That makes digital photos less reliable as evidence than photos taken with film.

Videos A photographer may also make a video of a crime scene. He often follows a path from the outside of the scene to the center. This is the path an investigator takes when she first walks through the scene. The photographer does not want team members to be seen in the video. Nor does he want to record their remarks as part of the permanent record. So he usually turns the sound off.

Videos don't show details as clearly as still photographs do. But videos can provide a dramatic "you are there" experience. They give people a sense of being at the original crime scene. A video can also be used to introduce new members of the team to the case.

Reading Checkpoint What types of photographs does a photographer take at a crime scene?

Skills Activity

Observing

Look at the photographs in Figure 9. They are examples of the four types of photos that might be taken at crime scenes. Use details from the photos to compare long-range, medium-range, and point-of-view photos.

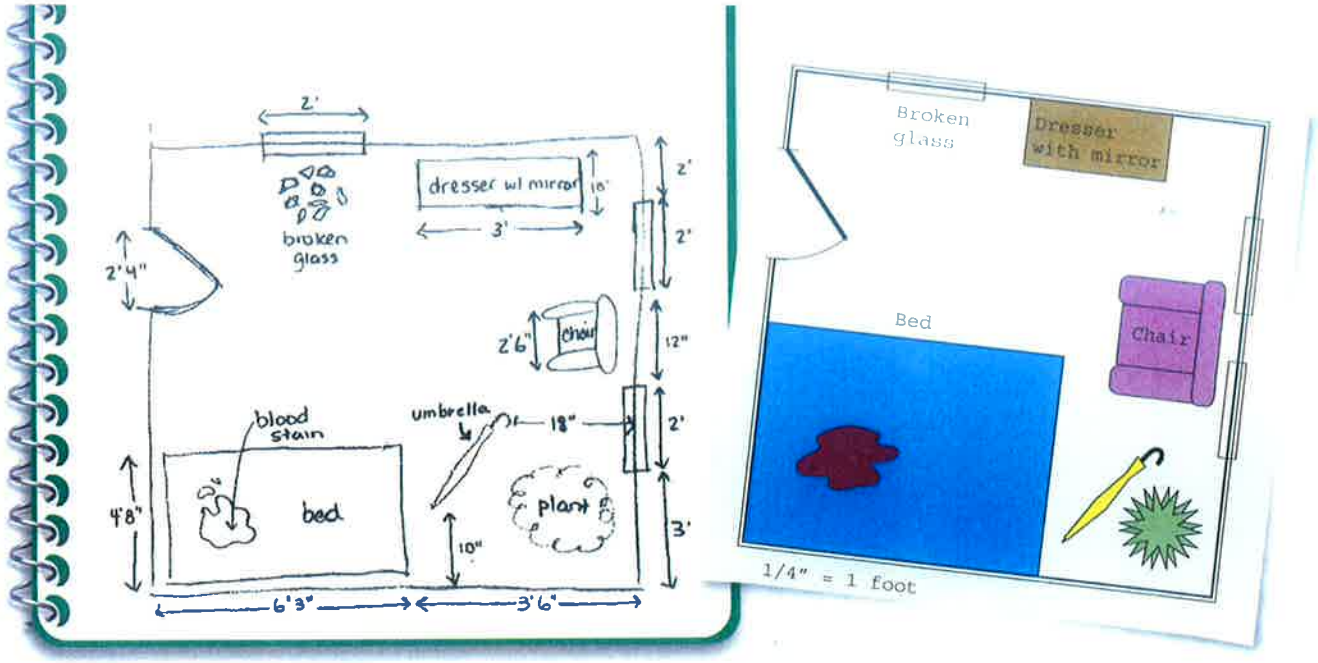


Figure 10
Sketch vs. Scale Drawing
A CSI made the measurements recorded on the sketch at a crime scene. An artist used the measurements and a computer program to make a scale drawing of the room.

Sketches The next task is making sketches of the crime scene. A **sketch** is a rough drawing that is done quickly and without much detail. Like photographs, sketches are visual records of a crime scene. But a sketch doesn't include everything a viewer could observe at the scene. Investigators decide which objects to include in a sketch and which to ignore.

The sketch in Figure 10 includes measurements. It shows the length of the walls, the width of the doorway, and the width of each window. There are also measurements for the bed and other items in the room. Measurements are used to mark the locations of objects, such as an umbrella. All the measurements must be accurate. If not, investigators won't be able to use the sketch to make models of the crime scene that can be shown in court.

Scale Drawings An artist can use the sketches from a crime scene to make two-dimensional drawings, or models, of the scene. The drawings will be larger or smaller than the area they represent, but they will be drawn to **scale.** The scale is the ratio of the model to the actual size of the object. For example, suppose the scale is 1 inch equals 1 foot. Then a 3-inch line on the drawing will represent 3 feet at the crime scene.

Today, most artists use **c**omputer-**a**ided **d**rafting (CAD) software to make scale drawings. Most CAD programs include drawings of rooms or street intersections. Operators use data from the crime scene sketches to complete the drawings. Programs may include symbols for cars, furniture, and even splashes of blood. A CAD program lets the artist zoom in on areas of the crime scene. Or the artist can make a large version of the drawing for use in court.

Skills Activity

Calculating

You are investigating a bank robbery that is similar to one that took place in Spain. The detective in Spain asks for a sketch of the bank vault at your crime scene. Before you send the sketch, you need to convert the measurements from feet to meters—a unit of length used in Spain. The vault is 12 feet wide, 16 feet long, and 11 feet high.

Hint: 1 meter = 3.28 feet

Written Notes The record of a crime scene also includes notes. Police officers make notes when they respond to a 9-1-1 call. They often carry a notebook like the one in Figure 11. They use it to record the time, date, location, and type of emergency. They also record what they observed and what they did. Did they see a car speeding away from the scene? Did they force open a door to gain entry to an apartment?

Handwritten notes must be easy to read and well organized. A police officer wants to respond quickly when a detective asks a question. Officers will also refer to their notes if they are called to testify in a trial.

Dictated Notes An investigator often carries a small voice recorder. He uses the recorder to make notes as he does tasks at the crime scene, such as taking photographs. Later, he can listen to the tape and type up the notes.

Dictating notes is faster than writing notes. It also allows others to listen as the notes are being recorded. For example, an investigator describes what she sees during a walk-through of a crime scene. She is recording her first impressions. She is also communicating with other team members. When people share their ideas with other people, they are **communicating.** The ideas may be written or spoken. So team members need to be good readers, writers, speakers, and listeners.

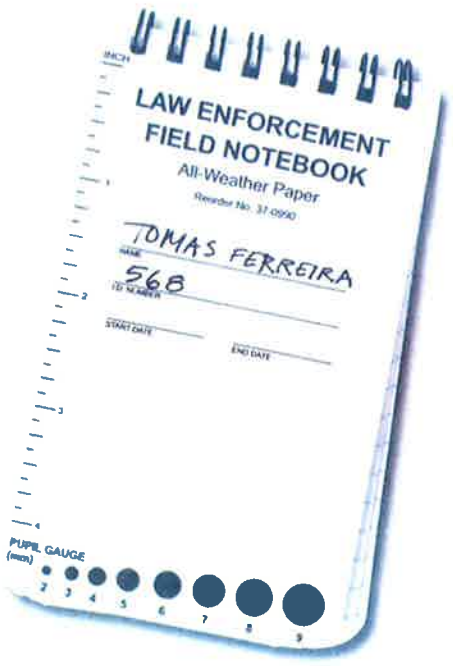


FIGURE 11
Taking Notes
This notebook is small enough to fit in a pocket. It has a waterproof cover that keeps the notes dry.

Lesson 2 Assessment

Target Reading Skill Sequencing Use your flowchart of actions at a crime scene to help you answer the questions below.

Reviewing Key Concepts

1. a. Describing How do police establish boundaries at an outdoor crime scene?
   b. Explaining Why do police establish one path to exit and enter a crime scene?
   c. Making Judgments Which type of crime scene do you think would be easier to control—an outdoor or an indoor crime scene? Give a reason for your choice.
2. a. Identifying List four methods that are used to make a record of a crime scene.
   b. Classifying What type of photo taken at a crime scene is likely to include a ruler? Why is the ruler in the photo?
   c. Problem Solving A CSI is getting ready to testify in court. The CSI needs to know the distance from the front door to the back door at the crime scene. Where should the CSI look for this data?

At-Home Activity

Measuring a Room Work with your family to make a sketch of a room in your home. Measure the length and width of the room. Mark the location of doors and windows. Include large items such as a table, a couch, a bed, or a refrigerator. Use measurements to show the location of objects in the room.