

Crime Scene Sketch Activity

The crime scene sketch is an invaluable aid in recording investigative data. It is a permanent record that provides supplemental information that is not easily accomplished with the exclusive use of crime scene photographs and notes. A crime scene sketch depicts the overall layout of a location and the relationship of evidentiary items to the surroundings.

It can show the path a suspect or victim took and the distances involved. It can be used when questioning suspects and witnesses. During trial, the crime scene diagram correlates the testimony of witnesses and serves as a tool for relaying reference and orientation points to the prosecutor, judge and jury.

I. Sketching the Crime Scene

Before beginning a sketch, *obtain a comprehensive view of the scene*. Determine the sketch limits – decide what to include and what to exclude. If the scene is complicated, *a number of sketches may be necessary* for adequate documentation.

Types of Sketches (see third page for examples)

- A. *Overview sketch* – consists of a bird's-eye-view or floor plan sketch of the scene. This is the most common type of sketch and consists of items on the horizontal plane.
- B. *Elevation sketch* – portrays a vertical plane rather than a horizontal plane. Examples include bloodstain patterns on vertical surfaces such as walls or cabinetry and bullet holes through windows.
- C. *Exploded view or cross-projection sketch* – consists of a combination of the first two sketches. It is similar to a floor plan except the walls have been laid out flat and objects on them have been shown in their relative positions.
- D. *Perspective sketch* – depicts the scene or item of interest in three dimensions. It is the most difficult sketch to create and requires some artistic skill.

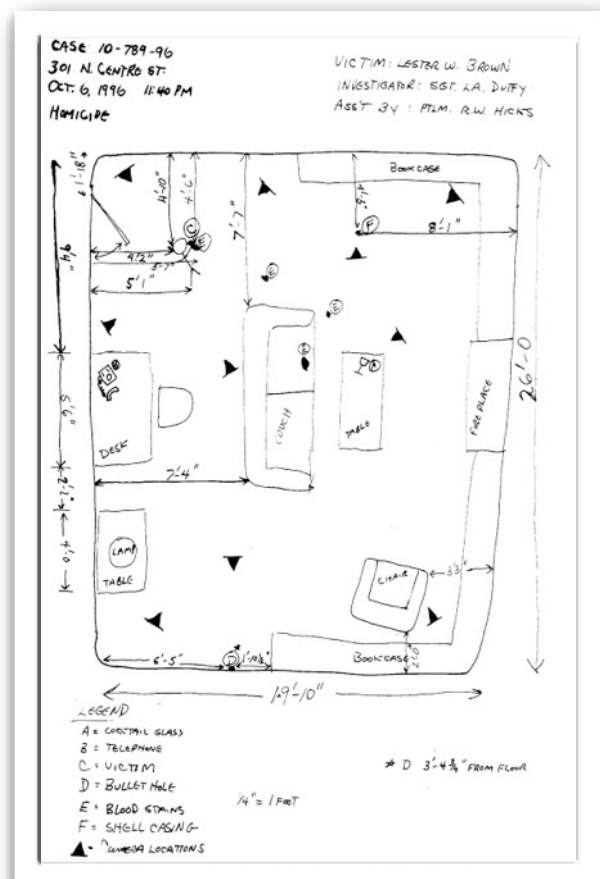
To Scale or Not to Scale

A. "Drawn to Scale" diagrams

1. To avoid a distorted view of the scene, measurements must be reduced in proportion so that they bear correct relationship to each other.
2. Select the scale of the diagram by fitting the longest dimension in the scene to the area of the paper being used.
3. Graph paper should be used when creating this type of sketch. Each block represents a specified length of measurement. Use convenient units for the scale (one block = 1 foot).

B. "Not to Scale" diagrams

1. Sketch can be accomplished more quickly than a scaled diagram.
2. Items are placed in the diagram based on approximation. This type of diagram may provide a distorted view of the scene. Correct proportions and relationships between objects may not be maintained.
3. Measurements are recorded on the sketch or in a chart.
4. This rough sketch may be used to complete a scaled diagram later.
5. These diagrams should be clearly marked **Not to Scale**.



Equipment

- A. *Supply of writing implements* – pencils may be used for the overall sketch. A sketcher may choose to use red pencils to denote bloodstains, and highlighters or other colored pencils to mark different types of evidence on the sketch. A sketch created in pencil will need to be preserved in some permanent manner as soon as possible. A good method of doing this is to photocopy the finished sketch and include the photocopy with the original.
- B. *Blank paper* – graph paper, while not essential, simplifies scale drawing.
- C. *Drawing surface* such as a clipboard.
- D. *Measuring devices* – tape measures are the most common tool used and should be at least 50 to 100 feet long. Other measuring devices may include a surveyor's wheel, a laser rangefinder, or a Total Station. GPS coordinates may be useful in locating an outdoor scene.
- E. *Ruler* for drawing straight lines, drawing to scale, and making very short measurements.
- F. *Magnetic compass* to determine true north.

Creating the Sketch

- A. If the scene is large, make a very rough sketch of the area while obtaining an over-all view of the scene. This initial rough sketch serves as a reference when making more complete sketches. Enlarged sections of this rough sketch can be made as separate drawings in order to bring out greater detail.
- B. Begin taking measurements and laying out a rough sketch.
 - 1. Lay down a baseline. This usually consists of the longest uninterrupted side of a room or, if outdoors, the curb line, building line, or even an imaginary line between two fixed points.
 - 2. Take other measurements of the periphery of the scene and add them to the baseline.
 - 3. Having established the outer boundaries of the sketch, add various objects in their proper positions.
- C. Measurements – write them down!
 - 1. Measurements can be recorded directly on the sketch or in a chart.
 - 2. Long distances may be measured with the odometer on an automobile.
 - 3. Critical measurements should be checked by two people.

Locating Objects on a Sketch

All points require two measurements for a two-dimensional sketch. Three measurements are required for a perspective (3-D) sketch

- A. *Rectangular coordinates* – an object (see Figure 4-6) is located by making a measurement at right angles from each of two walls. Works well for indoor measurements.
- B. *Transecting Baseline* - N/A in this activity
- C. *Triangulation* - N/A in this activity

Illustrating the Sketch

- A. Do not attempt to draw an object as it appears. Use symbols instead.
- B. Use lettered or numbered squares, circles, figures, or points to represent various objects in the sketch. Explain in the diagram key what these objects represent.
- C. If photography markers are used, ensure they correspond to same objects in the sketch. For example, if photo marker #5 is used to mark a handgun, make sure the handgun in the sketch is labeled #5.
- D. Label all doors and windows. Show with a curved line which way the door swings.
- E. Use an arrow to show the direction of the stairway.
- F. Unnecessary height or length may be cut off with jagged lines.

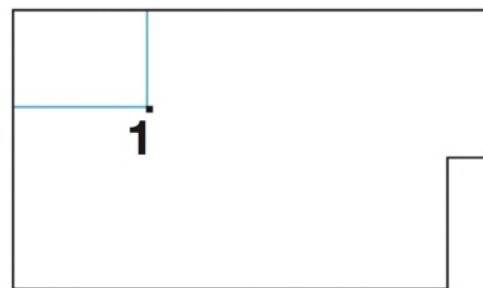


Fig. 4-6
Item 1 is located using rectangular coordinates.

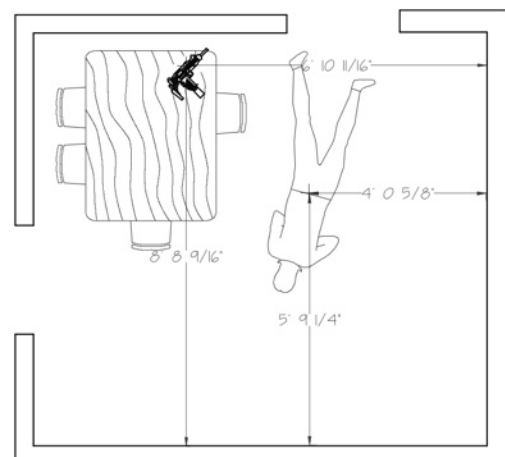


Figure 4

Labeling the Sketch

The following should be recorded on the sketch:

- Address or location of scene.
- Case number
- Date sketch was made and by whom.
- A key to identify the different objects in the sketch.
- An arrow to show the direction of north.
- Scale used for the sketch or the statement "Not to Scale".

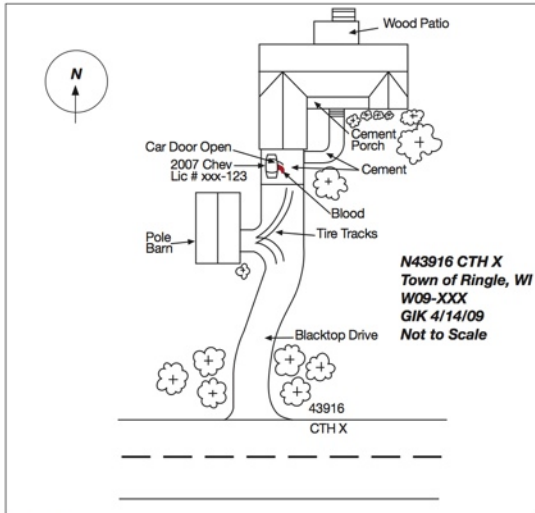


Fig. 4-1
Overview sketch of an exterior crime scene.

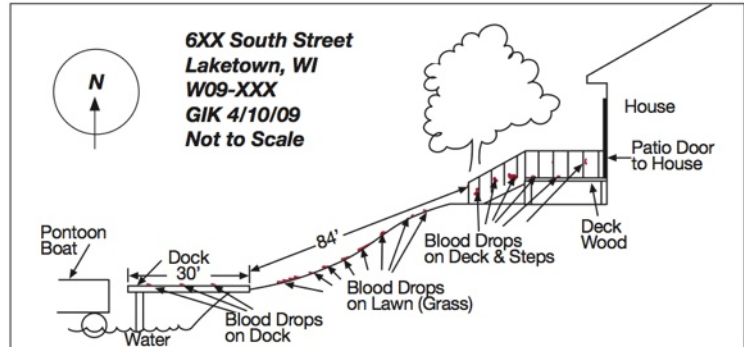


Fig. 4-2
Elevation sketch illustrating a blood trail.

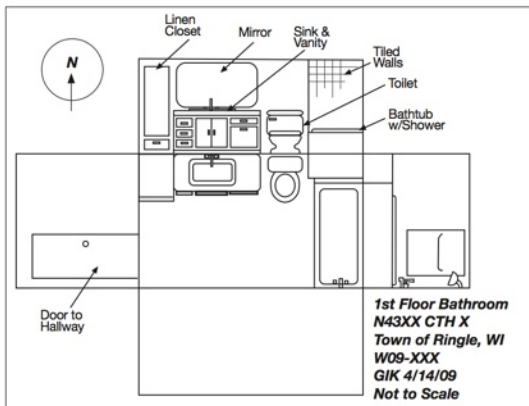


Fig. 4-3
Exploded view sketch of a bathroom.

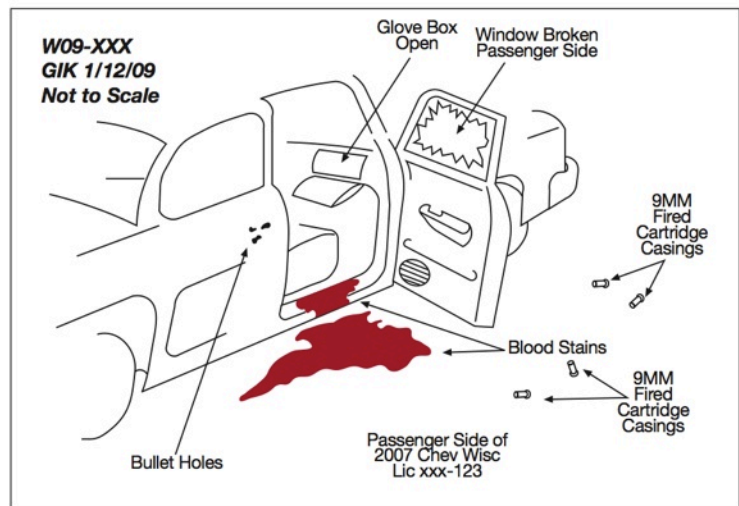


Fig. 4-4
Perspective sketch of the passenger side of a vehicle.

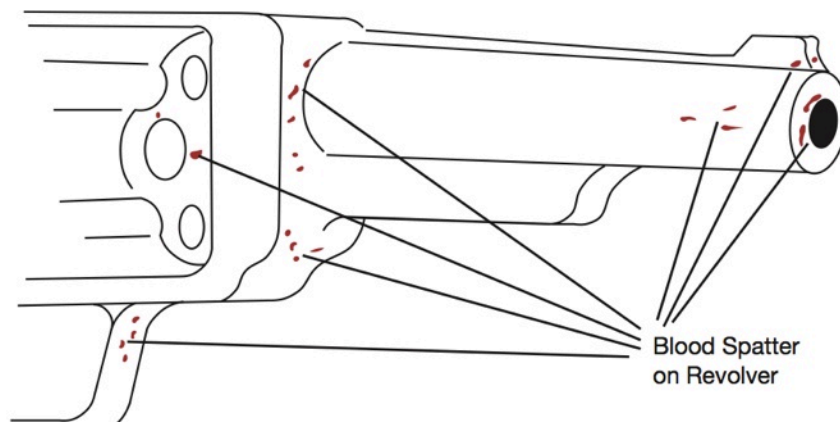


Fig. 4-5
Perspective sketch illustrating suspected blood spatter on a revolver.

ACTIVITY

Purpose:

You and your team will observe and sketch a "crime scene." You will be preparing an **overview** sketch, drawn to **scale**, with **rectangular** coordinates.

Procedure:

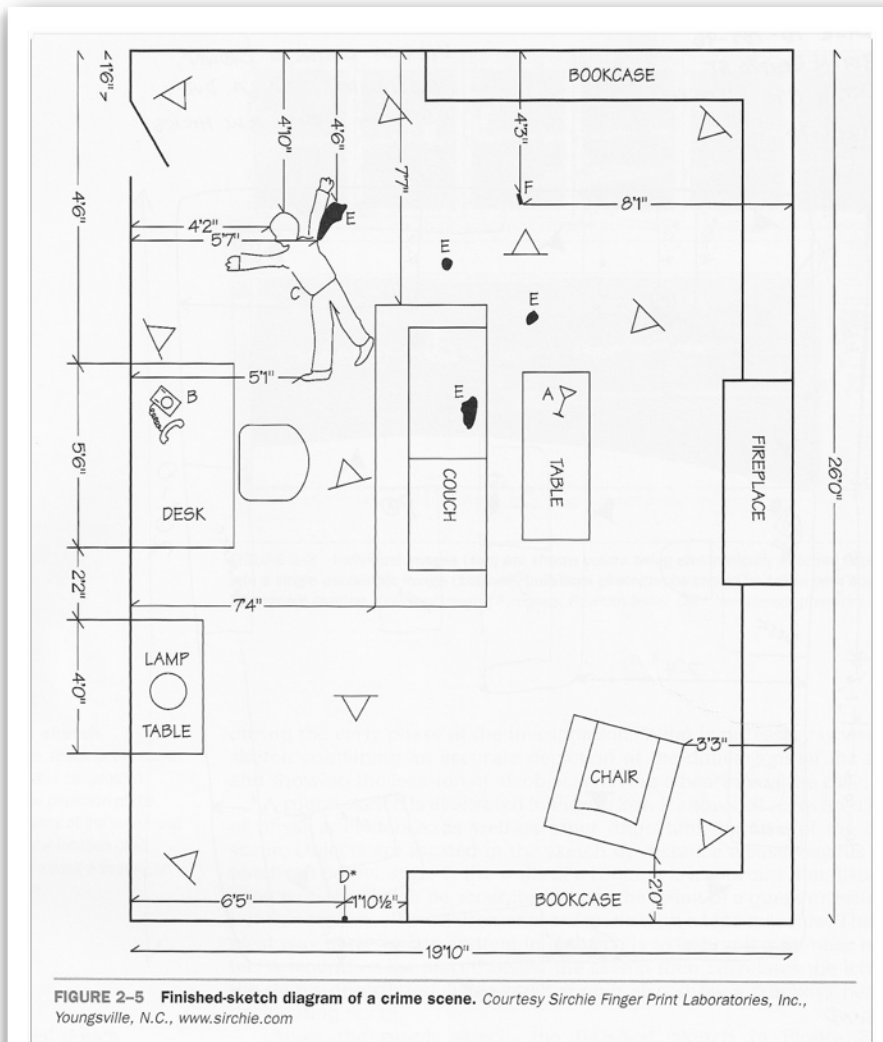
Decide who in your team will do the following:

1. Sketch
2. Take notes
3. Measure (2 members)
4. Observe for details
5. Photograph

Your team will then observe and record the crime scene. Your job is *not* to figure out what happened, just to sketch and record the details you think are necessary, as accurately as you can.

On Day 1, you and your team will take notes and sketch the scene and note the measurements of the scene. Your original on-site sketch will be a "not to scale" diagram. Follow the hints under Illustrating the Sketch and Labeling the Sketch. Make sure you get all necessary detail!

On Day 2, you and your team will sit down together and, using the notes and measurements from Day 1, reproduce on graph paper the crime scene, to scale.



You will turn in the **original notes** of the scene (photocopied if necessary), the **original sketch** (photocopied if necessary), and the **finished-sketch diagram**, and **photos** of the scene.

Make sure the final sketch is properly labeled with all necessary items. I'll be looking for compass direction, measurements, illustration key, neatness, clarity, accuracy, team member names, date, and scale (e.g. 5 lines = 1 foot)

Do your absolute best, but have fun doing it. :)