Forensics – Final Project: Part I – Crime Scene Investigation

Upon completing this stage of your investigation, you will show your mastery of:

* Working as a productive member of a team
* Conducting a systematic search of a mock crime scene
* Development of a crime scene sketch
* Demonstration of proper techniques of collecting and packaging evidence at a crime scene

Investigator’s Handbook

*(use this to help make sure you are completing all necessary tasks to a mastery level throughout your initial investigation*)

1. **Key Points** 
   1. Isolate and Secure the Scene
   2. Document the Scene
   3. Search for Evidence
   4. Collect and package evidence while maintaining Chain of Custody
   5. Submit evidence for analysis
2. **Secure the Crime Scene**
   1. Look for signs of life
   2. Cordon off the scene (only allow authorized personnel in ~ max 10 investigators at a time)
   3. Bodies should be certified as “dead” by a medical examiner (ME) before being moved
3. **Survey the Crime Scene**
   1. A walkthrough is performed by the crime scene investigator, the first officer, & sometimes the lead detective
   2. Record initial observations of who, what, where, when, and how
   3. Make a plan of action
4. **Document the Crime Scene (must do all of the methods listed below)**
   1. Notes – Record the following while at the crime scene (details are key)
      1. Date
      2. Time
      3. Description of the location, weather, and environmental conditions
      4. Description of the crime
      5. Location of the evidence relative to other key points
      6. Names of all people involved
      7. Any other relevant information
   2. Photography
      1. Nothing should be moved until photographed (by everyone)
      2. Take photos of the scene and the surroundings
      3. Photograph entrances and exits
      4. Use wide and close-up photos
      5. Use various angles of each piece of evidence
      6. Use a ruler to show size
   3. Sketches – draw a rough sketch at the scene (reconstruct a final sketch later) including:
      1. Date, time, and location
      2. Scale
      3. Recovered items
      4. Important features
      5. Accurate distance measurements of objects (from 2 fixed points)
      6. A legend for the description of items
      7. A compass designating North
      8. Names of the investigators, victims, and suspects
   4. Videography
      1. Narrate the video
      2. Be objective
      3. Record from different perspectives
5. **Measuring Techniques**
   1. Triangulation
      1. For each piece of evidence being recorded, use two permanent objects as reference points that are not likely to be moved
      2. The two reference points and the piece of evidence form a triangle, hence the term triangulation
      3. Whatever object you are measuring to or from, use the same spot on the object every time
   2. Rectangular Coordinates – Baseline
      1. The simplest form of the rectangular coordinate system
      2. Using a straight line between two known points, items are measured along the line and then measured perpendicular to that line
      3. Inside or outside of a house, this line can be a straight wall
      4. For outdoor scenes, use a string or a long measuring tape as the reference or baseline
   3. Rectangular coordinates – Grid
      1. Measure the distance of the items from two perpendicular base lines
      2. This technique is particularly appropriate in a room with perpendicular walls or in the outdoors with perpendicular streets
   4. Polar Coordinates
      1. Measure both the distance and direction (angle) an object is from a known reference point
      2. For example, 40 feet from the edge of the house and 15 degrees east of north
6. **Search the Crime Scene**
   1. When searching a crime scene wear the following, if available, to minimize contamination
      1. Disposable gloves
      2. Masks (N/A for class purposes)
      3. Coveralls with a hood (N/A for class purposes) – but long hair needs to be tied back
      4. Slippers – for class purposes, using socks will work
   2. Search patterns
      1. Depend on size and location of the crime scene and the number of investigators available
      2. Stick to one pattern and one supervisor
      3. It’s better to collect everything and not need it than fail to collect something and need it later
      4. Spiral – may move inward or outward; best used where there are no physical barriers
      5. Grid – basically a double-line search; effective, but time-consuming
      6. Line (Strip) – best in large, outdoor scenes
      7. Zone (Quadrant) – most effective in houses or buildings; teams are assigned small zones for searching
   3. Physical evidence must be packaged and collected before time and weather can alter it
   4. Physical evidence = any object that can establish that a crime has been committed or links a crime and the victim or suspect
   5. The Golden Hour – the window of opportunity to collect time-sensitive information or evidence
   6. Each item must be placed in a separate container, and sealed and labeled
   7. The most fragile evidence is collected and packaged first
   8. Different types of evidence require specific or special collection and packaging techniques (see FBI handbook)
   9. The body is property of the coroner or ME; collection of evident on the body is done by that department
   10. Containers such as vials, envelopes, plastic bags, paper bags, canisters, and cardboard boxes are good packaging devices
   11. Most items should be placed in a primary container and then in a secondary container
   12. Trace evidence may be placed on a piece of paper which is then folded in a “druggist fold” and placed in a secondary container
   13. Containers should be sealed with tamper proof tape, and dated & initialed
   14. Each package should contain:
       1. Date, time location
       2. Case number
       3. Agency and collector’s name
       4. Victim’s name(s)
       5. Description of contents
   15. Never package two items from two different sources or locations
7. **Chain of Custody**
   1. There must be a written record of all the people who have had possession of an item of evidence, beginning at the time of the collection
   2. Every person who has handled or examined the evidence must be accounted for
   3. Chain of Custody should include
      1. Date and time of transfer
      2. Location of transfer
      3. To/From names
      4. Purpose of transfer
8. **National Databases**
   1. Crime scene investigators can submit evidence for analysis to several national databases depending on the type of evidence
   2. Examples include:
      1. Automated Fingerprint Identification System (AFIS)
      2. Integrated Automated Fingerprint Identification System (IAFIS)
      3. Combined DNA Index System (CODIS)
      4. Integrated Ballistics Identification System (IBIS)
      5. International Forensic Automotive Paint Data Query (PDQ)

In the space below:

1. List your team members (remember, you will be working on this throughout the ENTIRE YEAR – choose wisely)
2. List responsibilities for scene processing for each team member
3. List materials you will need for the next two days of processing
4. Develop an evidence tag and chain of custody form (google sheet/document) that will be generically filled out for all evidence
5. Create a google sheet template to “collect” evidence (must include spots for evidence #, description, packaging material)