

Transcript

Fingerprints Interactive

Opening:

Welcome, CSI trainees – thanks for coming to your inservice session on fingerprints as evidence. We've got a short video for you to watch, as a review of what you need to think about when dealing with fingerprints at a crime scene. Afterwards, you'll go out with a couple of experienced officers to a crime scene to see what you can figure out. Let's get started.

All right. You've got your review; now it's time to head out into the field. Detectives Gates and Morgan are going to take you out to a scene that was called in a little while ago.

Travel:

Today we're heading to a house on a homicide call, but this one's a little different. Apparently the suspect committed the crime, then decided not to just leave the scene and to hang out in the house for awhile instead.

From what I heard, they think that the person spent a good deal of time poking through this victim's library after the crime was committed – drinking some of his high-end liquor, reading through some of his files, things like that.

Someone must have heard the crime being committed, or saw something unusual, because it seems like the suspect left the library in a hurry. Left a bunch of potential evidence that we can take a look at.

Here we are. Remember, we're focusing on finding some quality fingerprints at this scene, so pay attention to what you're doing.

Hotspots:

In my experience, when people commit robberies where the victim is away from the location, the thieves sometimes forget to be careful. They may see a fine wine in a cabinet and decide to "treat" themselves while they're committing their crime – and this could turn out to be their downfall. While this glass here could be the victim's, it could just as easily be the thief's. You need to document this as evidence so we can find out one way or the other.

The trick with a situation like this is the cup itself – it's curved, plus it's got a handle, so it can be extremely difficult to photograph where prints might be on here. Taking the handle off completely might damage or destroy any prints that are there. We can still recover these prints though – we just need to use flexible casting materials, which bend around curved surfaces and help us avoid destroying evidence.

Many times criminal use gloves to prevent them from leaving fingerprints. What they *don't* think about is the fact that we can get fingerprints from the gloves themselves if they are left behind. Let's go through how to take a fingerprint from a latex glove.

One place a suspect may leave fingerprints is actually on the deceased victim. Murderers often end up grabbing their victims for one reason or another – to stop them from escaping, to immobilize them, or to dispose of their body. I've always wished that I could catch a criminal this way.

In my experience, when people commit crimes, they almost always use a firearm. Part of your job involves taking fingerprints from a weapon either found at the scene or linked to the scene from somewhere else.

Closing:

Great work in there today. Staying one step ahead of the criminals makes this one of the most interesting jobs I can imagine.

Remember what you learned today, and you'll be solving your own cases in no time. Good luck!

Video:

When considering fingerprints at a crime scene, you need to think about two things. First, you need to collect fingerprint evidence properly, in a way that captures the information you and the lab need in order to gain accurate information. Second, you need to understand how to identify key characteristics of fingerprints in order to determine matches more effectively.

The sophistication of analysis of evidence for fingerprints is advancing quickly. Many items that prints could not be lifted from in the past, such as burned items, can now be analyzed. It is recommended that the investigator consult a qualified Evidence Collection Technician to help preserve or develop latent prints, as well as stay abreast of the latest developments in fingerprinting such as polylights and lasers.

Generally, latent fingerprints on non-porous materials deteriorate rapidly upon prolonged exposure to conditions of high temperature and humidity. Consequently, they should be collected and forwarded to a lab as soon as possible. Once the object bearing latent prints is secured by wrapping or bagging, ensure that it is well-protected from frictional contact in order to prevent the prints from being smeared or obliterated. For all fingerprint evidence, you will want to collect a comparison sample, if possible, and package it in a clean, stiff envelope that you seal and mark with your name, date, description, and exhibit number.

The classification of fingerprints into distinct groups based on general similarities allows the fingerprint examiner to search for an unidentified fingerprint within a specific section of the fingerprint file rather than having to search the whole file. There are numerous fingerprint classification systems in use throughout the world today. These systems are all based on three fundamental ridge formations described by many researchers. They are the arch, the loop – both radial and ulnar – and the whorl.

Individuals generally have a mixture of pattern types on their fingertips, with some correlation between the left and right hands. There is also evidence that the general fingerprint pattern may be genetically determined. While the loop pattern is the most common, classification of individuals by assigning a pattern type to each of the ten fingers in an ordered fashion serves as a first line of differentiation. However, no such classification is likely to be unique.

The first thing to keep in mind at a crime scene is that every surface *could* have been touched by criminal fingers – and therefore, you should take precautions not to compromise the scene by adding your own fingerprints to the mix, or by destroying fingerprints that exist on the scene. To do this, it's essential that you follow some basic techniques.

For all types of surfaces, fully photograph the item first.

When capturing fingerprints on absorbent materials, follow these guidelines:

Do not handle the material with your fingers and do not attempt to develop the fingerprints yourself.

Place the paper or other absorbent material in a plastic bag or cellophane protector.

Label and seal the bag properly, including your name, date, description, and exhibit number.

When capturing fingerprints on hard surfaces such as plastic, metal or glass, follow these guidelines:

1. You may dust for latent fingerprints. Remove developed prints with lifting tape and place the tape on a 3" x 5" card which contrasts in color with the dusting powder used. Mark the card with your initials, the date, and an exhibit number. Place the card in an envelope and seal it.

When capturing fingerprints on soft surfaces, follow these guidelines:

1. Carefully remove putty, caulking compound or other soft material bearing visible fingerprint impressions. Leave as much excess material surrounding the fingerprint as possible. Take care not to touch or distort the fingerprint.

2. Glue the mass of material to a stiff section of cardboard that is marked with your initials, the date, and an exhibit number.

3. Tape a protective cover over the specimen, such as a paper cup or glass jar.

4. Place the cardboard and covering container in a larger container, such as a box, and secure.

When collecting evidence, observe a few simple overall rules:

- Do not restrict your search inside the scene; evidence can be found in other places on the property or in the neighborhood.
- Always be sensitive to cross-contamination and spoliation issues.
- Always wear latex gloves to collect evidence.
- Always change gloves between items.
- Always use clean, suitable, and unused containers.
- Always let wet items, including organic fluids such as blood or semen, dry before packaging.
- Always package evidence in a fashion that will preserve it for laboratory testing.
- Always label properly.
- Always clean tools between items.
- Always keep evidence in a secure location on the scene.
- Always maintain the chain of custody.
- For all items, collect a comparison sample if you wish a comparison to be done between a known and a questioned item.