

MODULE 2:

Fingerprints

Objective: to learn the history, applications, types, and methods of visualizing, enhancing, collecting, preserving, identifying, and comparing fingerprints found at a crime scene.

Critical Thinking:

What is your most precious piece of identification? Your social security card? A school I.D.? Your movie rental pass? It may become your thumbprint.

Legislation is under way in some state assemblies to implement thumbprint identification to make it more difficult for people to obtain false identification. If a person tries to use false information to obtain a license, their thumbprint would be checked with the database. If the print were traced to another identity, the license would not be given. Thumbprint identification is also being discussed (and in some cases used) by the car rental, credit card, travel and banking industries.

Civil liberty groups argue that these thumbprint databases will inevitably be abused and evolve into ways for “Big Brother” to spy on citizens.

What do you think? Should our thumbprints join our names and social security numbers as required means of identification? Discuss the positive and negative aspects of using thumbprint identification.

MODULE 3:

Impression Evidence

Objective: to learn the definition, forensic significance, types, and methods for collecting and preserving impression evidence.

Lab #3: Lifting Imprints off Porous Surfaces

Now that you've seen Professor Miller use a gel lifter to lift and preserve a dust imprint, you can give it a try! You will need:

- the gel lifter from your kit
- a dusty footprint (**Suggestion:** Find dusty or dirty tracks that someone has left on the floor. Try doorways and mudrooms. You may have to ask someone to make the tracks for you, but it would be best if you did not see what shoes they were wearing. The less you know about who and what shoe made the print the more realistic this is!)
- a rolling pin or a glass from the kitchen
- a flashlight
- a ruler

Follow these directions and refer to Professor Miller's demonstration on the CD-ROM:

1. Take your gel lifter and place it over the dust imprint with the black gel-side down.
2. Roll over the gel lifter with a rolling pin or glass to make sure you lift all of the imprint.
3. Peel off the gel lifter.
4. Use the flashlight to get a better look at the imprint and the ruler to measure the length and width of the imprint.
5. Using the gel lifter and any notes you have taken about its appearance, try to identify the shoe (and the person) that made the imprint.

Lab #9: Direction of Travel and Angle of Impact

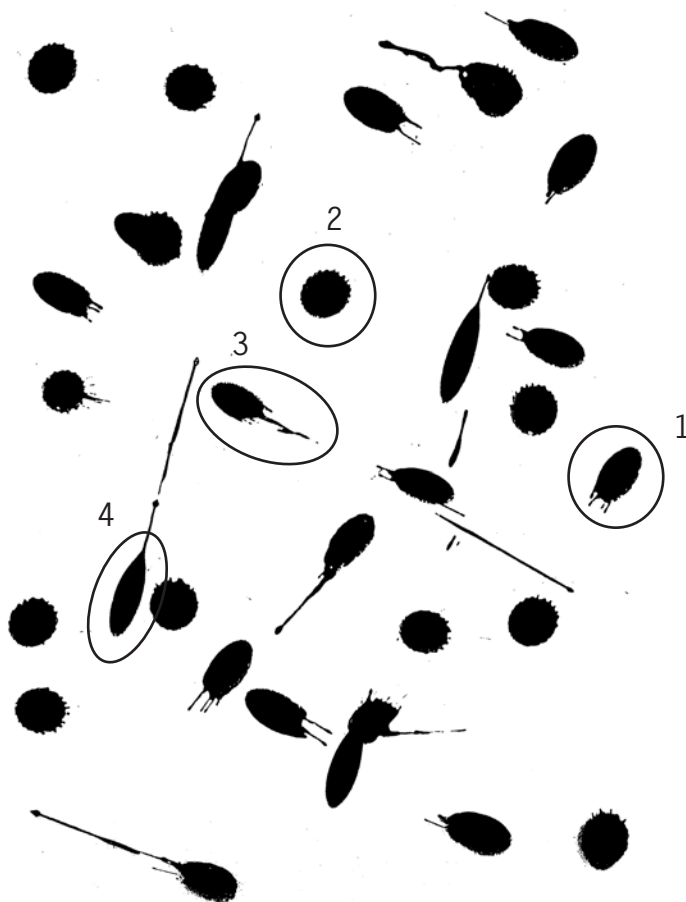
By analyzing the direction of travel and angle of impact of the following bloodstains, you can determine important elements of reconstruction.

You will need:

- a colored pen or marker
- a calculator with the sine function
- a ruler with millimeters

9A: Direction of Travel

Evaluate each of the four bloodstains below. With a colored pen draw an arrow in the direction from which each of the four bloodstains were spattered. (See page 96 for answers.)



Forensic Anthropology and *The Body Farm*

Forensic anthropology is the application of physical anthropology to the legal process. The identification of skeletal, badly decomposed, or otherwise unidentified human remains is important for both legal and humanitarian reasons. Forensic anthropologists apply standard scientific techniques to identify human remains, and to assist in the detection of crime. Forensic anthropologists frequently work



with forensic pathologists, odontologists, and homicide investigators to identify a decedent, discover evidence of foul play, and the postmortem interval. In addition to assisting in locating and recovering suspicious remains, forensic anthropologists work to suggest the age, sex, ancestry, stature, and unique features of a decedent from the skeleton.

One focal point for the study of forensic anthropology and human decomposition was made famous by a 1994 novel by Patricia Cornwell, *The Body Farm*. The farm, known officially as the University of Tennessee Forensic Anthropology Facility, was created in 1975 by professor Dr. William M. Bass with one body on a small plot of land.

Today the body farm is on three acres near the University of Tennessee Medical Center, in Knoxville, Tennessee. The outdoor field laboratory provides an ideal setting to scientifically document postmortem change and enables the investigation of “time since death” estimates. Once a year, FBI agents come to the body farm to dig for bodies that have been prepared to simulate crime scenes.

Bodies come from a variety of sources: unclaimed corpses from medical examiners’ offices and through donation. More than 450 people of all demographics have donated their bodies to the facility. Bodies are left in car trunks, exposed to all sorts of weather conditions, buried in shallow graves, or submerged in water.