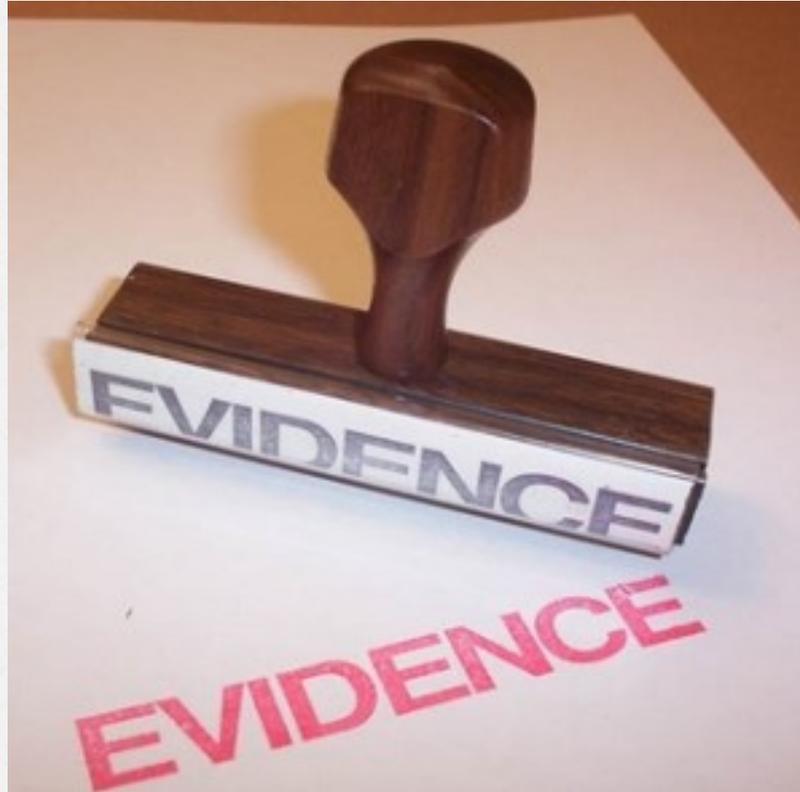


Crime Scene Evidence



Two general types of evidence:

1. Testimonial or Direct Evidence
2. Physical or Indirect Evidence



Type of Evidence

Testimonial evidence is a statement made under oath; also known as direct evidence or *prima facie* evidence.

Physical evidence is any object or material that is relevant in a crime; also known as indirect evidence.

Confusing but necessary to know!

Eyewitness Testimony

Factors that affect accuracy:

- Nature of the offense and the situation in which the crime is observed

- Characteristics of the witness

- Manner in which the information is retrieved

Additional factors:

- Witness's prior relationship with the accused

- Length of time between the offense and the identification

- Any prior identification or failure to identify the defendant

- Any prior identification of a person other than the defendant by the eyewitness



2. Physical Evidence

Common Types of Physical Evidence	
Drugs/toxins	Fibers
Paints	Soil
GSR	Glass
Firearms and ammunition	Blood
Impressions (shoe, bite, etc)	Bodily fluids
Petroleum products	Fingerprints
Alcohols (especially ethanol)	Hair
Rubber material	Tissues
Resins, plastics	Pollen
Explosive residues	Wood material
Serial numbers	Feathers
Documents	Bones
Tool marks	

Indirect and Circumstantial Evidence

- o **Indirect evidence**: evidence providing only a basis for *inference* about the disputed fact

INDIRECT EVIDENCE DOES NOT PROVE A FACT!!

- o **Circumstantial evidence**: implies a fact or event without actually proving it
 - o **STRENGTH IN NUMBERS** - The more circumstantial evidence there is, the more weight it carries!

Analyzing Physical Evidence

- o Requires:
 - o Questioned (UNKNOWN) sample
 - o Control (KNOWN) sample – for comparison

I told you that you weren't coming with us, Nicole!
Mom and Dad are using you as the control group.
They want to see if taking kids on vacation
makes them happier as adults.



Types of Physical Evidence

Transient evidence is temporary; easily changed or lost; usually observed by the first officer at the scene.

Pattern evidence is produced by direct contact between a person and an object or between two objects.

Conditional evidence is produced by a specific event or action; important in crime scene reconstruction and in determining the set of circumstances or sequence within a particular event.

Transfer evidence is produced by contact between person(s) and object(s), or between person(s) and person(s).

Associative evidence is something that may associate a victim or suspect with a scene or with each other; e.g., personal belongings.

Examples of Transient Evidence



Odor—putrefaction, perfume, gasoline, urine, burning, explosives, cigarette or cigar smoke

Temperature—surroundings, car hood, coffee, water in a bathtub, cadaver

Imprints and indentations—footprints, teeth marks in perishable foods, tire marks on certain surfaces

Examples of Pattern Evidence

Pattern evidence—mostly in the form of imprints, indentations, striations, markings, fractures, or deposits

Blood spatter

Glass fracture

Fire burn pattern

Furniture position

Projectile trajectory

Tire marks or skid marks



Clothing or article distribution

Gunpowder residue

Material damage

Body position

Toolmarks

Examples of Conditional Evidence

Light—headlight, lighting conditions, lights on or off

Smoke—color, direction of travel, density, odor

Fire—color and direction of the flames, speed of spread, temperature and condition of fire

Location—of injuries or wounds, of bloodstains, of the victim's vehicle, of weapons or cartridge cases, of broken glass

Vehicles—doors locked or unlocked, windows opened or closed, radio off or on, odometer mileage

Body—position and types of wounds; rigor, livor, and algor mortis

Scene—condition of furniture, doors and windows, any disturbance or signs of a struggle

SIGNIFICANCE of Physical Evidence

- o **Individual Evidence**: Can be related back to a single source; always involves a comparison



- o **Class Evidence**: can be associated only with a group of items that share properties or characteristics



****Probative Value* - the ability of evidence to prove something that is material to a crime***

Class vs. Individual Evidence



These fibers are class evidence; there is no way to determine if they came from this garment.



The large piece of glass fits exactly to the bottle; it is individual evidence.

Class vs. Individual Evidence

- o There are 13 stations around the room with various types of evidence.
- o Label # 1-13 on a piece of paper.
- o When you get to each station, write down what the evidence is.
- o Then classify whether the evidence is Class or Individual Evidence, or both.
 - o If it is both, explain why.

Probability and Class Evidence

- o A man was spotted leaving the scene of a convenience store shooting in a hurry. He is the prime suspect. A low-quality camera in the store has given investigators a general idea of the individual's clothing and vehicle.

Consider the facts:

- o White male, 6'0", medium build
- o Light blue polo
- o Black Shorts
- o Black flip flops
- o Drives an orange Volvo



Analyzing the Suspect

- o All of these things (height, build, clothing, car color/make) are indirect, circumstantial evidence
- o HOWEVER, when grouped together (Strength in Numbers) they have greater **PROBATIVE VALUE**

Statistics of Circumstantial Evidence

- o A second incident, a robbery, occurred not too far from the convenience store. This time, a young man, 5'10", medium build, with a black shirt, jean shorts and blue Nike sneakers was seen leaving scene of the crime. It was suspected to be a Northern Highlands student!

male students wearing black shirt = B%
Total number in class

male students wearing jean shorts = J%
Total number in class

male students with blue Nikes = N%
Total number in class

$B\% \times J\% \times N\% =$ Likelihood of ALL THREE CRITERIA in the SAME individual (%)

Narrows down the suspect number! This is an example of probative value!

