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

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

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

  INDIRECT EVIDENCE DOES NOT PROVE A FACT!!

- **Circumstantial evidence**: implies a fact or event without actually proving it

  - **STRENGTH IN NUMBERS** - The more circumstantial evidence there is, the more weight it carries!
Analyzing Physical Evidence

- Requires:
  - Questioned (UNKNOWN) sample
  - 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

<table>
<thead>
<tr>
<th>Blood spatter</th>
<th>Clothing or article distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass fracture</td>
<td>Gunpowder residue</td>
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<tr>
<td>Fire burn pattern</td>
<td>Material damage</td>
</tr>
<tr>
<td>Furniture position</td>
<td>Body position</td>
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<tr>
<td>Projectile trajectory</td>
<td>Toolmarks</td>
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<tr>
<td>Tire marks or skid marks</td>
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</table>
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

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

- **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

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

- White male, 6’0”, medium build
- Light blue polo
- Black Shorts
- Black flip flops
- Drives an orange Volvo
Analyzing the Suspect

- All of these things (height, build, clothing, car color/make) are *indirect, circumstantial evidence*

- HOWEVER, when grouped together (Strength in Numbers) they have greater *PROBATIVE VALUE*
Statistics of Circumstantial Evidence

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% x J% x N% = Likelihood of ALL THREE CRITERIA in the SAME individual (%)

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