



Forensic Science

Service of the Crime Laboratory

Bell-Ringer

Forensic Science

- What are the four mechanisms for recording @ a crime scene?
- How many sketches should be available @ the end of an investigation?
- What is the Forensic Policy for Photographing a crime scene?

A wide variety of service offered by the Forensic Laboratory

- Because...
- Variation of Local Laws.
- The different capabilities and functions of organization to which the laboratory is attached.
- Budgetary and staffing limitations

Physical Science Unit

- Applies principles and techniques of chemistry, physics, and geology to the identification and comparison of crime scene evidence.
- These areas can be...
- Drugs, Glass, Paint, Explosives and Soil.

Biology Unit

- This is a Job for Biologists and Biochemists.
- They apply their knowledge towards the identification and DNA Profiling of dried blood stains, and other bodily fluids, the comparison of fibers, and the identification and comparison of Botanical materials such as wood and plants.

Firearms Unit

- Responsible for the examination of Firearms, Discharged Bullets, Cartridge cases, shot gun shells and ammunition of all types.
- Clothes and other objects are also tested in order to detect firearm discharge residue and to approximate the distance from the target to the weapon.
- The basic principles of firearm examination are also applied here to the comparison of marks made by TOOLS.

Document Examination Unit

- Handwriting and Typewritten on questioned documents are studied by the documentation unit to determine authenticity and /or source.
- Other Responsibilities are...
- Evaluation of Ink, examination of indented documents, obliterations, erasures as well as burned and charred documents.

Photography Unit

- A complete photographic laboratory is maintained to examine and record physical evidence.
- The tools include...
- Digital Imaging, infrared, ultraviolet and x-ray photography
- This unit also aids in the presentation of photographic exhibits for courtroom presentations.

Toxicology Unit

- Body Fluids and organs are examined by the toxicology group to determine the presence or absence of drugs and poisons.
- This unit is usually under the direction of the medical examiners office.
- Field Instruments such as the Intoxilyzer are used to determine the alcoholic consumption of individuals.

Bell-Ringer
Forensic Science
09/12/2007

● ***Give three examples of evidence evaluated by the following Forensic Science Laboratory Units:***

● Physical Science Unit

● Biology Unit

● Firearms Unit

Latent Fingerprint Unit

- The responsibility for processing and examining evidence for latent fingerprints when they are submitted in conjunction with other laboratory examinations belong to latent fingerprint unit.

Polygraph Unit

- The polygraph or Lie detector has come to be recognized as an essential tool of the criminal investigator rather than the forensic scientist.
- Polygraph Examination is handled by people trained in the techniques of criminal investigation and interrogation.

Voiceprint Analysis Unit

- Involved in cases concerned with telephone threats or tape recorded messages.
- Investigators may require the skills of the voiceprint analysis unit to tie the voice to a particular suspect.
- The utilization of a sound spectrograph that transforms speech into a visual graphic display called a voiceprint.
- The validity of this technique rests with the understanding that speech is unique to the individual and the voiceprint displays this uniqueness.

Evidence-Collection Unit

- This unit dispatches specially trained personnel to the crime scene to collect and preserve physical evidence that will later be processed at the crime laboratory.

Evidence Collection needs to be a collaborative effort.

- Forensic Investigations require the implementation of skills processed by a multitude of individuals.
- It is the concerted effort of many people, not just one investigator (ex. CSI) to bring a crime from evidence to analysis to trial.

Thank You For your attention.

- Please refer to the Plan of the Week for your homework assignment!