

KEY CONCEPTS

Review with your students before your visit. Students should be familiar with basic lab techniques such as using a microscope and following written lab procedures.

CHROMATOGRAPHY

A technique used to separate mixtures. In ink chromatography, the separation pattern can serve as a “fingerprint” in identifying the pen used to write a document in question.

FINGERPRINTS

An impression of the unique pattern formed by raised ridges found on the tips of human fingers. Sweat and oil from the hands leave behind a copy of this pattern when people touch objects. Fingerprints are used to identify individuals.

LATENT PRINTS

Fingerprints that cannot be seen with the naked eye. Before these fingerprints can be analyzed and identified, forensic scientists must use different methods like super glue fuming and dusting to make them visible.

VISIBLE PRINTS

Fingerprints that can be seen without any enhancement techniques. Examples include dirty or bloody prints collected by law enforcement agencies.

RIDGES

The raised lines on fingertips that form the fingerprint pattern. These are also called friction ridges because they provide the grip necessary for humans to hold and manipulate objects.

FOOTWEAR IMPRESSIONS

Footwear can provide important forensic clues. This evidence is created when someone steps on a soft surface and leaves a three-dimensional impression behind. Forensic scientists make a cast of the impression to examine in the laboratory.

CRIME LAB

TRACE EVIDENCE ANALYSIS

Forensic scientists routinely use a variety of microscopes to examine what is known as trace evidence. This can include hairs, fibers, wood, soil, sand, building materials, paint and other substances.

WHITE POWDER ANALYSIS

White powder refers to evidence in powdered form. It can be any color. Crime labs frequently receive unidentified powders taken from a crime scene. Forensic scientists perform various chemical tests on the powder to establish the identity of the substance.