

Class Starters & Enders

Making the Most of Instructional Time Five Minute Lessons

Class Starters and Enders help utilize the last minutes of class when a lesson ends but there is not enough time to start another, or for an interest approach at the beginning of class. Mini-lessons correlate to GPS in the programs areas below.

Who Done It??

Program Areas: Law and Justice

Instructions: Read the narrative and make notes of important points, answer questions, and be ready to discuss this topic.

On crime scene investigation TV shows, finding fingerprints and linking them to the criminal in question seems as effortless as dusting a few surfaces. In actual practice, however, locating and properly identifying fingerprints is not as simple as portrayed.



A human fingerprint is unique and can be used to identify any individual if a correlating file exists. Law enforcement agencies maintain fingerprint databases.

The inconvenient truth however, is that **fingerprints** are generally found all over a crime scene, and are very difficult to differentiate, even by experts. Once **isolated** and collected, they must still be sent to fingerprinting experts in laboratories. Potentially isolating an individual already in the system is generally a complicated and unsure process, though new technology allows scientists to digitally compare prints. Once a positive match has been identified, the process of convicting a suspect is even more difficult and complicated.

Many different factors can affect the outcome of a fingerprint, including the pliability of skin, slippage, **deposition** pressure, the surface the print is found on, and what medium is used in the laboratory to develop the print.

Although there are hundreds of techniques for fingerprint detection, many are only of academic interest and there are only about 20 effective methods in use in the more advanced fingerprint laboratories. Fingerprints on surfaces are described as either patent or latent.

Patent fingerprints are left when a substance – such as paint, oil or blood — is transferred from the finger to a surface. Patent prints are easily photographed without further processing. **Latent fingerprints**, however, are invisible prints unintentionally left on surfaces. They must be enhanced before they can be seen. This is when “dusting” occurs. A third type of prints is known as **plastic prints**. Plastic prints are left in materials which hold the shape of the ridges.

Fingerprints are formed by the skin on the **palmar surface** of the hands and feet, which forms **papillary ridges** in patterns that are unique to each individual. In 1858, Englishman William Herschel discovered the uniqueness of fingerprints, and learned they do not change over time. Even identical twins who share the same DNA do not have identical fingerprints – there is only a one in two quadrillion chance someone else has the same fingerprints as you do.

Although ancient people probably did not realize fingerprints could be used as certification of identity, it is evident fingerprints were used for identification processes as early as 650 A.D. Human fingerprints have been found on artifacts dating back to ancient Babylonian times. The use of fingerprints dates back before 200 B.C., when they were used as signatures — identification of people responsible for making things such as pottery, bricks, and paintings. Scotland Yard was the first police agency to make fingerprint searches standard parts of investigations, and since then, fingerprint identification methods have been used by police agencies around the world to identify both suspected criminals as well as the victims of crime.

In addition to being a crime-solving tool, fingerprints can be used to ensure security. Fingerprint reading devices allow individuals to scan their fingerprint in order to gain access to a secure room or area in the workplace.

Review

1. When were fingerprints first used for identification?
2. What are the two types of fingerprints?
3. What are the ridges on fingerprints called?
4. Why would finding specific fingerprints in an office be difficult?
5. Do identical twins have identical fingerprints?

Language Connection

Define the following terms.

Deposition	Palmar Surface
Fingerprints	Papillary Ridges
Isolated	Patent Fingerprints
Latent Fingerprints	Plastic Fingerprints