



High School Science Virtual Learning

Forensic Science

Fingerprint Classification

May 21, 2020



Forensic Science

Lesson: May 21, 2020

Objective/Learning Target:

Students will be able to identify the different types of fingerprints.

Bellwork: Answer in your notebook or piece of paper

Bellwork 1:

What is individual evidence?

Bellwork 2:

What is class evidence?



Bellwork Questions/Answers

Bellwork 1: What is individual evidence? Evidence that points to an individual.

Example DNA

Bellwork 2: What is class evidence? Evidence that is not particular piece of evidence, but points to a group.

Example: Shoe size

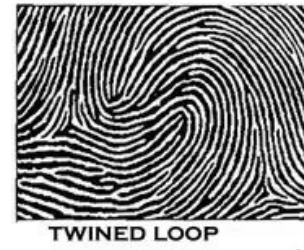
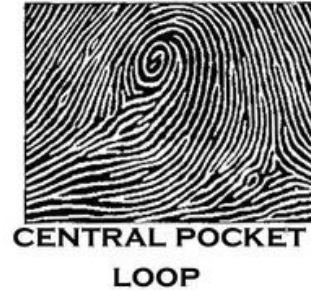
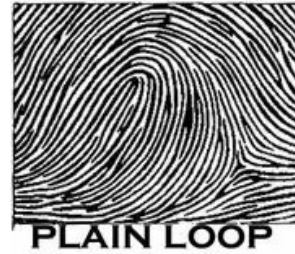
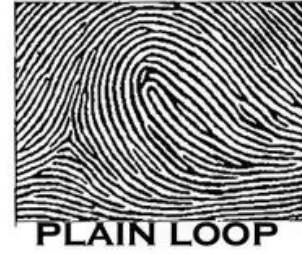


FINGERPRINTS

What are Fingerprints?

Read this [website](#) to learn more about what fingerprints are. Please follow along and answer the following questions.

- 1) What are fingerprints?
- 2) When are fingerprints formed for humans?
- 3) Can fingerprints be removed?
- 4) What factors can influence fingerprint development?



What are Fingerprints? Questions/Answers

- 1) What are fingerprints? Fingerprints are the friction ridges on fingers, palms, toes, and soles of the feet. These ridges will help individuals hold onto things.
- 2) When are fingerprints formed for humans? Fingerprints are formed 6 months after conception. In other words, 3 months prior to birth.
- 3) Can fingerprints be removed? Fingerprints can be removed through abrasion or caustic actions, but once those cease, fingerprints will come back. So they cannot be permanently removed.
- 4) What factors can influence fingerprint development? DNA can cause differences in fingerprints. Other environmental factors, such as umbilical cord length, blood pressure, and oxygen levels can influence fingerprints.

What Types of Fingerprints are there?

Read this [website](#). Carefully takes notes in your notebook or piece of paper about the various kinds of fingerprints. You will answer the questions below and complete the practice on slide 9.

- 1) What percentage of fingerprints are loop fingerprints? What percentage are whorl fingerprints? What percentage are arch fingerprints?
- 2) What is minutiae?
- 3) What are the different kinds of whorl fingerprint patterns?

Types of Fingerprints Questions/Answers

- 1) What percentage of fingerprints are loop fingerprints? What percentage are whorl fingerprints? What percentage are arch fingerprints? **Loop fingerprints account for 70%, whorl fingerprints account for 25%, and arch fingerprints account for 5%.**
- 2) What is minutiae? **Minutiae are ridge characteristics.**
- 3) What are the different kinds of whorl fingerprint patterns? **Plain whorl, central pocket loop whorl, double loop whorl, accidental whorl.**

Identifying Fingerprint Types: Practice



Fingerprint Practice Answers



Loops



Whorls



Arches

Additional Practice/Information

Use this quiz to practice your understanding of Fingerprints: [Quiz](#)

[Fingerprint Types Video](#)

