



High School Science Virtual Learning

Forensic Science

Fingerprint Lifting Techniques

May 22, 2020



High School Forensic Science Lesson: Friday, May 22 2020

Objective/Learning Target:

Students will be able to explain how and when to use different fingerprint lifting techniques.

1. Why would you want to dust for fingerprints at a crime scene?
2. What cause a fingerprint to be left when a surface is touched?



1. Fingerprints with enough detail to see ridge characteristics can be used as individual evidence to place a suspect at a crime scene.
2. There are pore on your finger tips that secrete fluid made up of primarily water, but also amino acids(proteins), minerals, and lipids(fats) that will leave a residue in the pattern of your unique print.



Lesson Activity:

Directions:

1. Watch the videos one time all the way through to listen and take in the information.
2. Watch the video a second time and answer the questions in the practice section:

Link(s): [Forensics Expert Explains How to Lift Fingerprints | WIRED](#)



Practice

You will use the information from the activity on slide 5 to answer the following questions.

Practice Questions

1. What type of lighting helps to see prints on a smooth, non-porous surface?
2. Why does powder color matter?
3. When lifting off a textured surface what technique should be used?
4. What does the spray he used react with in the latent print?
5. What are the 3 types of prints?
6. What is the difference between a man and a woman's fingerprint?

Answer Key

Once you have completed the practice questions check with the work.

1. Oblique lighting
2. The powder color should contrast the surface so the print is easily seen to lift.
3. Casting with a silicone based produce.
4. The lipids(fats) in the print.
5. Latent, patent, and plastic.
6. Women have a tighter more detailed minutiae pattern making it harder to get clear prints.



More Practice

You will use the information from the videos on the More Practice slide to answer the questions.

More Practice Questions

Iodine Fuming

1. When do you use iodine fuming to develop latent prints?
2. Why does he have to do the second step of dabbing the prints?

Ninhydrin Development of Fingerprints

3. What does ninhydrin development react with when developing latent prints?
4. What helps to develop the latent prints faster?

Developing Fingerprints with super glue

5. Super glue fuming should only be used on what type of surface?
6. After fuming what has to be done to lift the print to be examined?



Answer Key

Once you have completed the practice questions check with the work.

Iodine Fuming

1. On paper evidence
2. Iodine will fade over time when in contact with the air.

Ninhydrin Development of Fingerprints

3. The amino acids in the secretions that make up a latent print.
4. Heat

Developing Fingerprints with super glue

5. Non-porous surfaces
6. Dusting with powdered so the print can be lifted.



Additional Practice

[How to Compare Fingerprints - The Basics](#)