

Name: _____

Due Date: _____

Fingerprint Dusting Lab

For each station, read and follow the instructions and answer any questions necessary:

Station One: Leaving Prints

1. Run your fingers through your hair or on the bridge of your nose.
2. Take an empty pop can and place your fingers onto the bottle to leave prints.
3. Take your pop can and place it at station Four.
4. Answer the following questions:

1. What's the difference between a delta and an arch?
2. What is the difference between a plain arch and a tented arch?

Station Two: IAFIS

Read the paragraphs below and answer the questions:

The **Integrated Automated Fingerprint Identification System (IAFIS)** is a national automated fingerprint identification and criminal history system maintained by the Federal Bureau of Investigation (FBI). IAFIS provides automated fingerprint search capabilities, latent searching capability, electronic image storage, and electronic exchange of fingerprints and responses. IAFIS is the largest biometric database in the world, housing the fingerprints and criminal histories of 70 million subjects in the criminal master file, 31 million civil prints and fingerprints from 73,000 known and suspected terrorists processed by the U.S. or by international law enforcement agencies.

Employment background checks and legitimate firearms purchases cause citizens to be permanently recorded in the system. For instance, the State of Washington mandates that all applicants seeking employment in an inpatient setting that houses vulnerable minors (such as children who are mentally challenged, physically or emotionally ill) are fingerprinted and entered into IAFIS as part of their background check in order to determine if the applicant has any record of criminal behavior.

1. What is IAFIS?
2. How do fingerprints get entered into the IAFIS system?

Station Three: Matching

Match the fingerprinting pattern with the definition by writing the letter of the correct print next to the vocabulary word

Loop: _____ Whorl: _____ Plain Arch: _____ Tented Arch: _____ Delta: _____



A



B



C



D



E

Station Four: Dusting and Lifting Prints

1. Take a pop can that does not have any dust on it
2. Dip the brush *VERY LIGHTLY* in the powder
3. *LIGHTLY* brush the brush over the can
4. When a print shows up darkly, take a piece of tape and place it on the print then lift it off and place it in one of the boxes below
5. Repeat step 4 until you have 4 prints in the boxes below

1	2	3	4
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Station Five: Identifying Lifted Prints

1. For each print above, identify the type of print you lifted
 - a. 1: _____
 - b. 2: _____
 - c. 3: _____
 - d. 4: _____
2. Of the prints you lifted, which one was easiest to read?
 - a. What made it easy to read?
3. Of the prints you lifted, which one was hardest to read?
 - a. What made it difficult to read?

Station Six:

Read the paragraphs below and answer the questions:

Patent

Patent prints are chance friction ridge impressions which are obvious to the human eye and which have been caused by the transfer of foreign material from a finger onto a surface. Some obvious examples would be impressions from flour and wet clay. Because they are already visible and have no need of enhancement they are generally photographed rather than being lifted in the way that latent prints are. An attempt to preserve the actual print is always made for later presentation in court, and there are many techniques used to do this. Patent prints can be left on a surface by materials such as ink, dirt, or blood.

Plastic

A plastic print is a friction ridge impression left in a material that retains the shape of the ridge detail. Although very few criminals would be careless enough to leave their prints in a lump of wet clay, this would make a perfect plastic print. Commonly encountered examples are melted candle wax, putty removed from the perimeter of window panes and thick grease deposits on car parts. Such prints are already visible and need no enhancement, but investigators must not overlook the potential that invisible latent prints deposited by accomplices may also be on such surfaces. After photographically

recording such prints, attempts should be made to develop other non-plastic impressions deposited from sweat or other contaminants.

1. What is the difference between a patent print and a plastic print?
2. What is one example of a patent print?
3. What is one example of a plastic print?

Station Seven:

Read the paragraph below and answer the questions:

Latent

Although the word latent means hidden or invisible, in modern usage for forensic science the term latent prints means any chance or accidental impression left by friction ridge skin on a surface, regardless of whether it is visible or invisible at the time of deposition. Electronic, chemical and physical processing techniques permit visualization of invisible latent print residues whether they are from natural sweat on the skin or from a contaminant such as motor oil, blood, ink, paint or some other form of dirt. The different types of fingerprint patterns, such as arch, loop and whorl, will be described below.



Latent prints may exhibit only a small portion of the surface of a finger and this may be smudged, distorted, overlapped by other prints from the same or from different individuals, or any or all of these in combination. For this reason, latent prints usually present an “inevitable source of error in making comparisons,” as

they generally “contain less clarity, less content, and less undistorted information than a fingerprint taken under controlled conditions, and much, much less detail compared to the actual patterns of ridges and grooves of a finger.”

1. What makes a latent print unique from other prints?
2. Why are latent prints an “inevitable source of error?”