

Forensic Science

Lab Manual



Oak Meadow

Oak Meadow, Inc.

Post Office Box 615

Putney, Vermont 05346

oakmeadow.com



Table of Contents

Lab: Classification of Fingerprints	1
Exercise 1: Classifying Individual Prints	
Exercise 2: FBI Cards	
Exercise 3: NCIC and Henry Classification Systems	
Exercise 4: The FBI Needs Help!	
Lab: Dusting and Lifting Fingerprints.....	39
Exercise 1: Creating Prints	
Exercise 2: Dusting and Lifting Prints	
Lab: Latent Detection Methods	69
Exercise 1: Developing Latent Fingerprints with IKI Fuming	
Exercise 2: Developing Latent Fingerprints with Ninhydrin	
Exercise 3: Developing Latent Fingerprints with Cyanoacrylate	
Lab: Analysis of Glass	95
Exercise 1: Macroscopic Observations	
Exercise 2: Fracture Patterns	
Exercise 3: Density of Glass	
Exercise 4: Testing Refractive Index	
Lab: Arson Investigation	117
Exercise 1: Arson Investigation	
Lab: Explosives and Explosive Residue.....	141
Exercise 1: Testing for Explosive Residues	



EXPERIMENT

Classification of Fingerprints

Hands-On Labs, Inc.

**with Consulting and Content Contribution from
Richard Tewes, CSCSA, CFWE, CBPE**

Version 42-0174-00-01

Review the safety materials and wear goggles when working with chemicals. Read the entire exercise before you begin. Take time to organize the materials you will need and set aside a safe work space in which to complete the exercise.

Experiment Summary:

Students will learn about the Henry Classification System and the National Crime Information Center (NCIC) classification system. They will learn how to print a suspect using FBI fingerprint cards and ink. Students will study a variety of fingerprints to identify the core, delta(s), fingerprint pattern, and ridge count.

Note: *This experiment assumes completion of the Fingerprint Dusting experiment.*

Objectives

- To understand the different print categories: arch, whorl, and loop
- To learn the similarities and differences between the NCIC and Henry classification systems
- To learn how to count the ridges of loop prints
- To figure out which category of prints has more than one delta
- To understand minutae points

Time Allotment: 4 hours



Materials

MATERIALS FROM	QTY	ITEM DESCRIPTION
Student Provides:	1	Paper, white sheet
	1	Soap
	1	Paper towels
	1-2	Volunteers
	1	Digital Camera
LabPaq Provides:	1	Magnifier, hand held, 2-in, 8x
	4	FBI Fingerprint Cards
	2	Ink Pad, strips
	1	FBI Card (3), on LabPaq CD
	1	FBI Card (7), on LabPaq CD
	1	FBI Card (8), on LabPaq CD
	1	FBI Card (9), on LabPaq CD
	1	FBI Card (14), on LabPaq CD
	1	FBI Card (10), on LabPaq CD
	1	FBI Card (15), on LabPaq CD

Note: The packaging and/or materials in this LabPaq may differ slightly from that which is listed above. For an exact listing of materials, refer to the Contents List form included in the LabPaq.

Discussion and Review

Fingerprint classification is a science which requires years of intensive coursework to become an expert. The science of fingerprint classification is referred to as *dermatoglyphics*, and those who have completed the rigorous training in fingerprint identification are known as **fingerprint examiners**. While this experiment will provide a general background to fingerprinting and introduce exercises that mimic what a fingerprint examiner encounters on a regular basis, performing this experiment will introduce you to the general principles used by an expert fingerprint examiner. It is a hope that this experiment will provide the excitement and interest necessary for one to begin the training for a career as a fingerprint examiner.

The first step of classification is to determine which of three possible fingerprint patterns (arch, loop, or whorl) the print falls under. See Figure 1.



Figure 1: Fingerprint patterns. **(Left)** Arch pattern; **(Middle)** loop pattern; **(Right)** whorl pattern.

An **arch** pattern is a pattern where all of the ridges enter on one side and leave on the other. An arch print has a rise, which looks like a small hill, in the center of the print. A **loop** pattern is a pattern where ridges enter and leave on the same side, creating a loop. A **whorl** pattern has an appearance similar to a bull's-eye or target, swirling in circles until it reaches its center point. The loop is the most common fingerprint pattern (65%), followed by the whorl (30%) and arch (5%) patterns.

While there are three main fingerprint patterns, each of the three main patterns contain a variety of subsets, allowing patterns to be further categorized.

There are two subsets in the arch fingerprint pattern: the plain arch and the tented arch. The plain arch is more common than the tented arch, and is present in 60% of all arch patterns. The **plain arch** is identified by its wave-like pattern of ridges, entering on one side and leaving on the other. The ridges rise in the middle of the pattern, forming a hill shape, which rises smoothly. See Figure 2. The **tented arch** contains the arch pattern (ridges entering one side and exiting the other); however, the hill shape is not smooth as in the plain arch. Rather, in a tented arch, the hill forms abruptly, creating a sharp spike in the center of the pattern with a near 90° angle. See Figure 3.



Figure 2: Plain arch. Note the smooth rise of the hill shape, in both plain arch patterns.



Figure 3: Tented arch. Note how the hill shape is formed in a near 90° angle (denoted by the red arrow) with a sharp increase in hill shape.

There are also two subsets in the loop fingerprint pattern, the radial loop and the ulnar loop. These loops are differentiated by the direction in which the loop flows. Loops which curve toward the radial bone (toward the thumb) are designated as a **radial loops**, while loops which curve toward the ulnar bone (toward the little finger) are designated as “**ulnar loops**.” See Figure 4. Ulnar loops are much more common; they are found in 94% of loop patterns. Unlike the arch subsets, it is necessary to know which hand a print was taken from in order to designate a loop print as either radial or ulnar. See Figure 5.



Figure 4: Radial and ulnar loops. **(Left)** If this print were on the left hand, it would be classified as ulnar and if it were on the right hand, it would be classified as radial. **(Right)** If this print were on the right hand, it would be classified as ulnar and if it were on the left hand, it would be classified as radial. Remember that a fingerprint is a mirror image of the print as it exists on your finger.



Figure 5: Hand determines loop. While both images show a loop pattern which opens to the left, the print on the left (**L. Thumb**) is classified as ulnar, and the print on the right (**R. Index**) is classified as radial.

A key feature of both radial and ulnar loops is the presence of a delta. A **delta** is a point in the fingerprint pattern where two or more directions of ridges diverge. A delta can be a dot, ridge bifurcation, a short or abruptly ending ridge, or the meeting location of two different ridges. When it appears that there are two ridges that may serve as the delta, the ridge that is closest to the center of the fingerprint is identified as the delta. See Figure 6. Radial and ulnar loop patterns contain one delta.

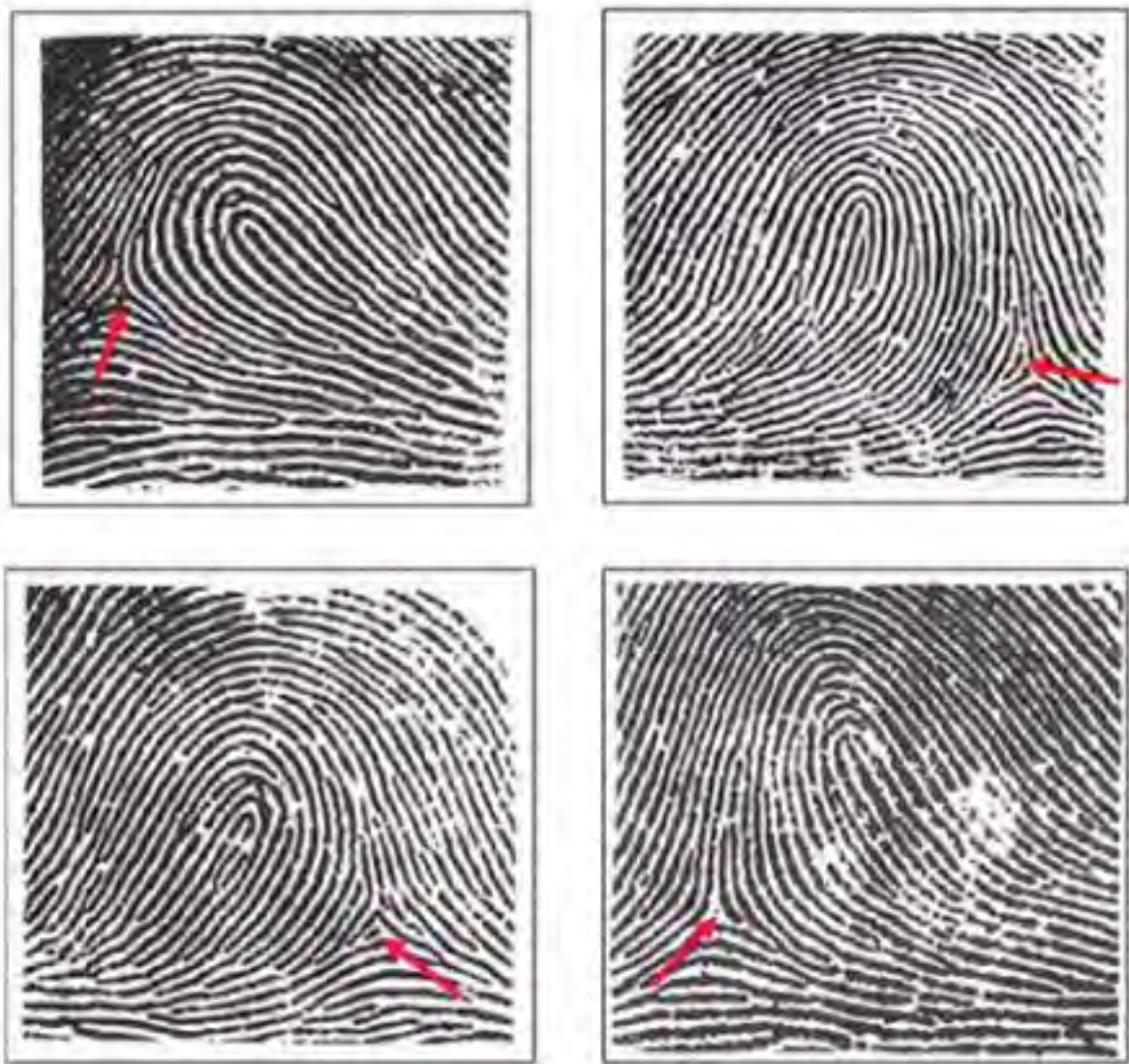


Figure 6: Single delta in radial and ulnar loops. In each of the loop pattern prints above, the delta is noted by the red arrow. Note how the delta differs in shape from print to print.

Following a loop print's classification as either ulnar or radial, it can be further described by its ridge count. A **ridge count** is the number of ridges a loop fingerprint (radial or ulnar) contains between the delta and the core. The **core** is the ridge located at the approximate middle (or center) of the fingerprint pattern. If there appear to be two ridges at the center of the print pattern, the ridge furthest from the delta is identified as the core. See Figure 7.

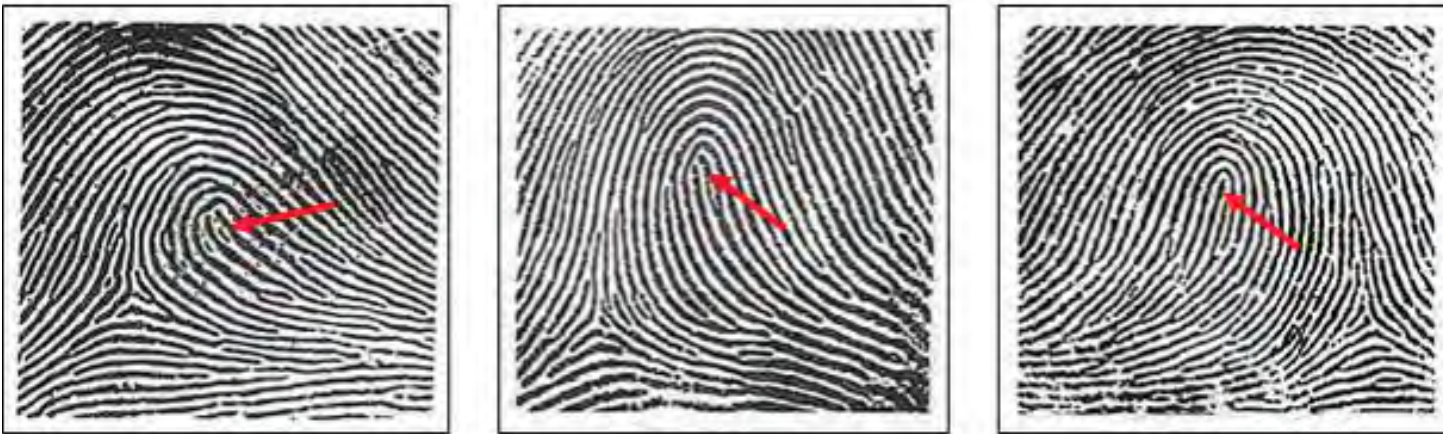


Figure 7: Fingerprint cores, denoted by red arrows.

To determine which ridges between the core and delta should be counted, an imaginary line is drawn between the delta and the core. The ridges that form the delta and the core are not included in the ridge count. See Figure 8.

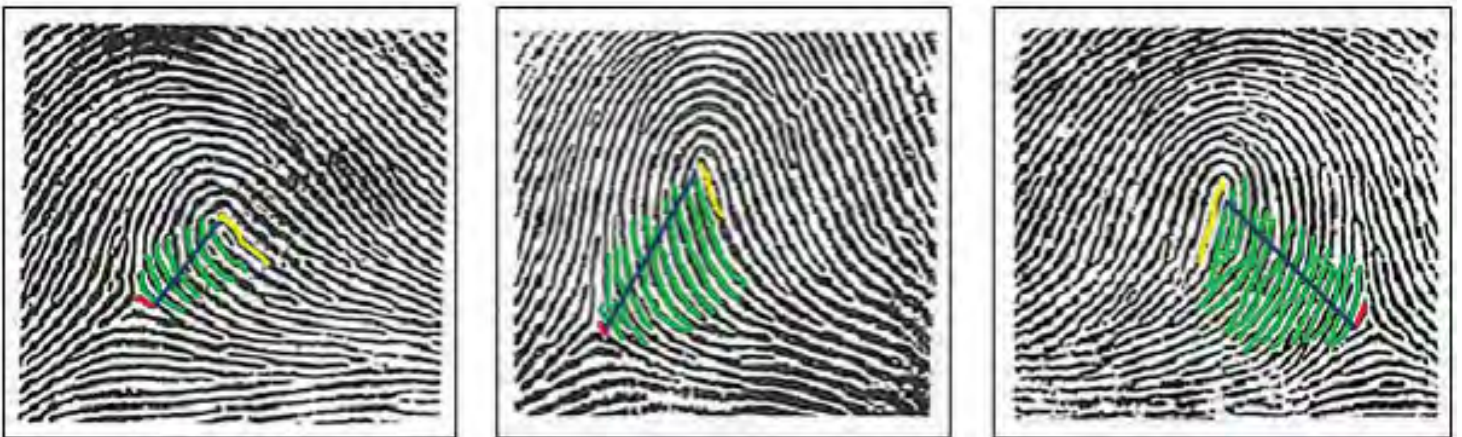


Figure 8: Ridge counting. In all three fingerprint patterns, the core is colored yellow, the delta is colored red, and the ridges between the core and the delta are colored green. The ridges which fall along the “imaginary” navy line between the core and delta are counted for the ridge count.

(Left) 7 ridges; **(Middle)** 12 ridges; **(Right)** 16 ridges.

The whorl fingerprint pattern has four subsets: the plain whorl, the central pocket loop, the double loop whorl, and the accidental whorl. Within this subset, 71% of prints are classified as plain, 13% are classified as central pocket loop, 13% are classified as double loop, and 3% are classified as accidental. An identifying feature of a whorl pattern is the presence of two or more deltas. Plain

and central pocket loop whorls contain two deltas and are known for their target or bull's-eye shape, which is formed from the ridges swirling around in circles until they reach a center point. The difference between the **plain whorl** and the **central pocket loop whorl** is the location of the swirling ridge pattern in relation to its two deltas. When classifying a whorl as a plain or central pocket loop, an imaginary line is drawn between the two deltas. In a plain whorl, the imaginary line drawn between the two deltas will cut through (or touch) one of the recurving ridges in the swirling pattern. For a ridge to be **recurving**, it must create a complete or nearly complete circle. See Figure 9. In the central pocket loop, the imaginary line drawn between the two deltas will not touch, or cut through any of the swirling, re-curving ridges. Additionally, in the central pocket loop, the center of the whorl pattern will be closer to one delta, as opposed to the plain, where the pattern is generally centered between the two deltas. See Figure 10. The difference between a curving and recurving ridge is often the only difference between a print being classified as a plain or central pocket loop whorl. See Figure 11.

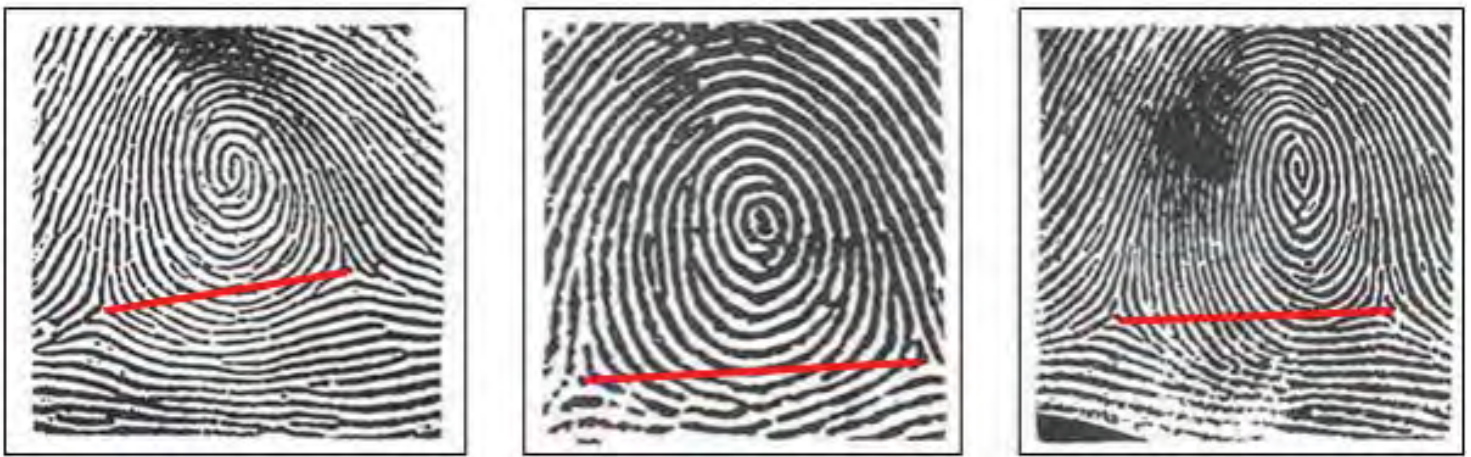


Figure 9: Plain whorl. Notice how the red line in each of the three fingerprints cuts through a recurving ridge in the whorl pattern. The red line is an “imaginary” line connecting the two deltas.



Figure 10: Central pocket loop whorl. Note that while the red lines *do* cut through ridges of the whorl pattern, none of the ridges are recurving ridges. These ridges curve, but they do not complete a full circular shape in the pattern.



Figure 11: Examination of ridge recurving. **(Left)** Central pocket loop whorl. Note how ridges along the imaginary line between deltas are curving, but not recurving. The ridges spiral outward, rather than creating a complete or near-complete circle. **(Right)** Plain whorl. Note how the ridges are recurving, creating full circular patterns along the whorl pattern.

The third subset of the whorl pattern is the double loop whorl, which does not contain the bull's-eye whorl pattern. Rather, the **double loop whorl** contains a pattern with two deltas surrounding two distinct, separate loop patterns, which swirl around one another. See Figure 12.



Figure 12: Double loop whorls. Three examples of fingerprints classified as double loop whorl. Note that each print contains a swirling pattern of two distinct, separate loops, flanked by two deltas.

The final subset of the whorl pattern is the accidental whorl. The **accidental whorl** is a mish-mash of two or more different patterns, containing two or more deltas. It is the subset for prints that do not conform to any of the other seven subsets. For example, an accidental whorl may be the combination of a tented arch and loop, or even the combination of a central pocket whorl, loop, and tented arch. See Figure 13.



Figure 13: Accidental whorl. **(Left)** The print is a combination of a loop and a tented arch. **(Right)** The print is a combination of a plain whorl and a loop. Note that both prints contain two deltas.

After a whorl print has been classified into the subsets of plain, central pocket loop, double loop, or accidental, it can be further described as containing an *inner tracing*, *outer tracing*, or *meet tracing*. The tracing description describes how the ridge tracings correspond to the two deltas. To determine the tracing of a whorl pattern, the ridge directly below the left delta is traced, until it passes the right delta. The number of ridges between the ridge tracing and the right delta are counted, and that number is used to determine the whorl tracing. See Figure 14.



Figure 14: Whorl tracing. **(Left)** Plain whorl print, denoted by the “imaginary” red line between the two deltas. **(Right)** The two deltas are identified in yellow. The ridge directly below the left delta is traced past the left delta, as shown in red. The green lines highlight the ridges between the tracing ridge and the right delta. The (green) ridges are then counted. In this print, there are three (green) ridges between the ridge tracing and left delta.

In a whorl with an **inner tracing**, the tracing ridge runs *between* the center of the whorl pattern and the right delta. Additionally, there are three or more ridges between the tracing ridge and the right delta, as shown in Figures 14 and 15.



Figure 15: Inner tracing. **(Left)** Plain whorl print, denoted by the “imaginary” red line between the two deltas. **(Right)** The tracing ridge (red) runs between the center of the whorl and the right delta (yellow). There are six ridges (green) between the tracing ridge and right delta.

In a whorl with an **outer tracing**, the tracing ridge runs *below (outside)* the right delta. Additionally, there are three or more ridges between the right delta and the tracing ridge, as shown in Figure 16.

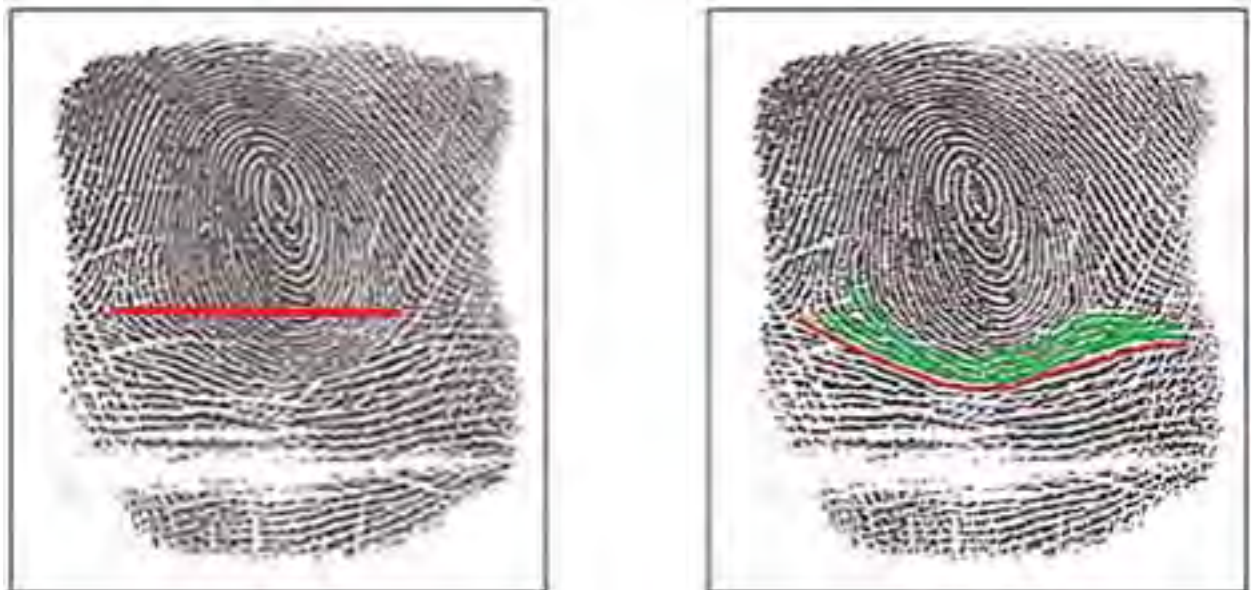


Figure 16: Outer tracing. **(Left)** Plain whorl print, denoted by the “imaginary” red line between the two deltas. **(Right)** The tracing ridge (red) runs below (outside) the right delta (yellow). There are four ridges (green) between the right delta and the tracing ridge.

In a whorl with a **meet tracing**, the tracing ridge can run either between the center of the whorl pattern and above the right delta, or between the center of the whorl pattern and below the right delta. The defining characteristic of a meet tracing is that there are less than three ridges between the tracing ridge and right delta. See Figure 17.



Figure 17: Meet tracing. **(Left)** Plain whorl print, as designated by the red line between the two deltas. **(Right)** The tracing ridge (red) runs between the center of the whorl and the right delta (yellow). However, there are no ridges between the tracing ridge and the right delta.

It is important to note that tracings are not an exact science; rather, they are often subjective. What one fingerprint expert may classify as an outer tracing, another may classify as a meet tracing. It is more common that an inner or outer tracing would be classified as a meet tracing, or that a meet tracing would be classified as an inner or outer tracing, than an inner tracing being classified as an outer tracing.

Following the classification of a fingerprint pattern, a fingerprint is examined for a series of focal points (characteristics). These focal points include: ending ridge, dot, divergence, bridge, short ridge, island, and bifurcation. See Figure 18. An **ending ridge** is the point where a ridge ends, or stops. A **dot** is a small ridge, lacking direction. While a dot is generally shaped as a circle, it can be any shape, from triangular to square, to a very small line. A **divergence** is a location where two ridges, which have been running parallel to one another, suddenly diverge, or move away from one another. A **bridge** is a ridge that connects two ridges together. A **short ridge** is simply a very short ridge, which is bigger than a dot, but much smaller than surrounding ridges. An **island** is a ridge which separates and then comes back together, forming an oval shape, or island. A **bifurcation** is a ridge that separates into two or more branches.

When examining a fingerprint for focal points, each focal point is studied to determine its angle, size, shape, and general position relative to other ridges and focal points in the print. If a fingerprint examiner identifies two fingerprints as being *similar with a ten point match*, it means that the two prints contained ten identical focal points, identical in size, shape, angle, and general position. Another term for focal points used by fingerprint examiners is **minutia** (or **minutia points**).

Exercise 1: Classifying Individual Prints

In this exercise, you will practice classifying fingerprints into their specific pattern type.

1. Gather the magnifying glass from your LabPak, and use as necessary.
2. For the following 14 fingerprints (prints “a” through “n”), classify them in Data Table 1 as follows:

Data Table 1: Print classifications			
Print	Pattern	Subtype	Further Description
a			
b			
c			
d			
e			
f			
g			
h			
i			
j			
k			
l			
m			
n			

Pattern:

- Arch, Loop, or Whorl

Subtype:

- If arch: (tented or plain)
- If whorl: (plain, central pocket, double loop, or accidental)
- If loop: (ulnar or radial)

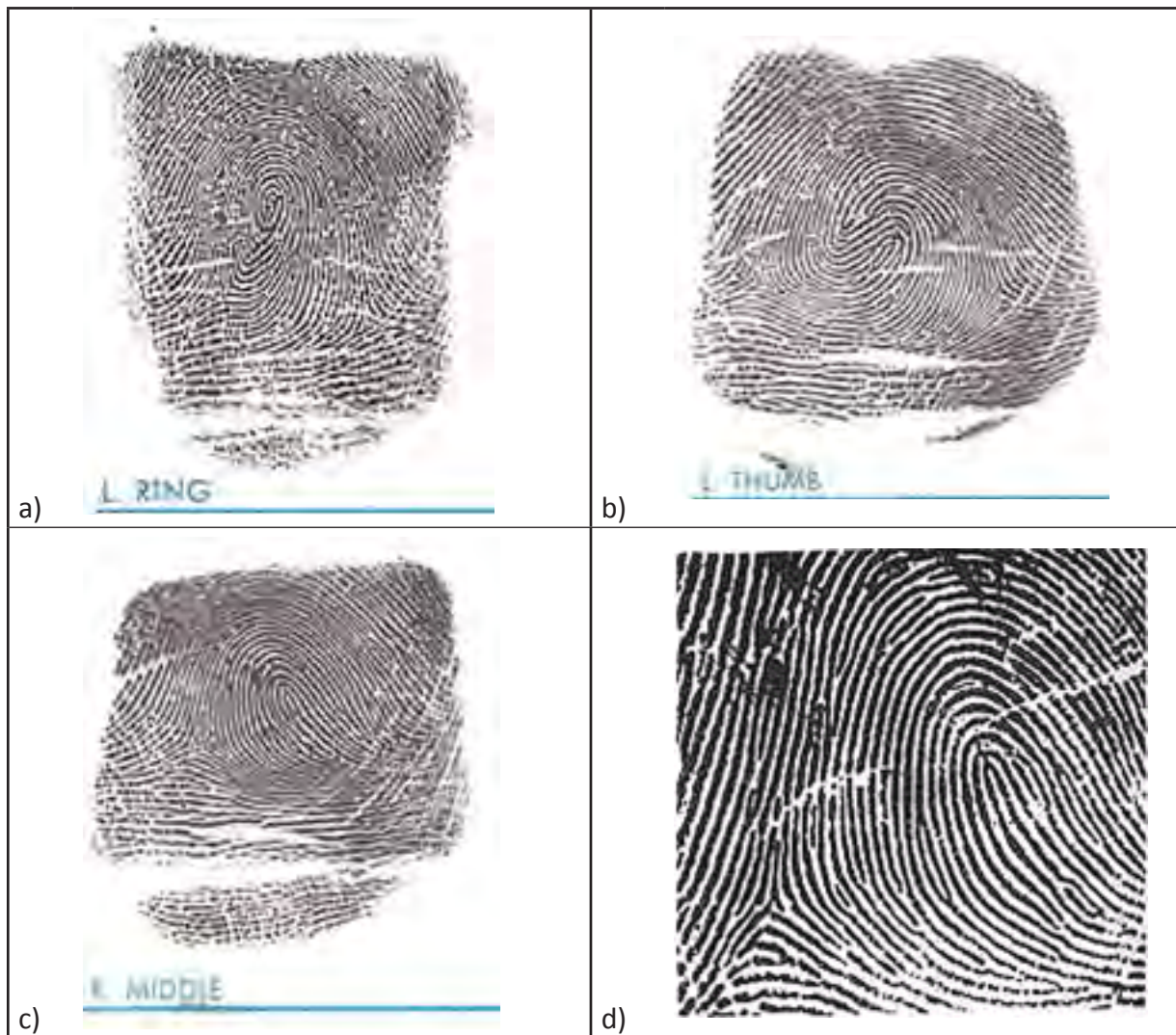
Note: *The loop subtype can only be determined if hand is provided.*

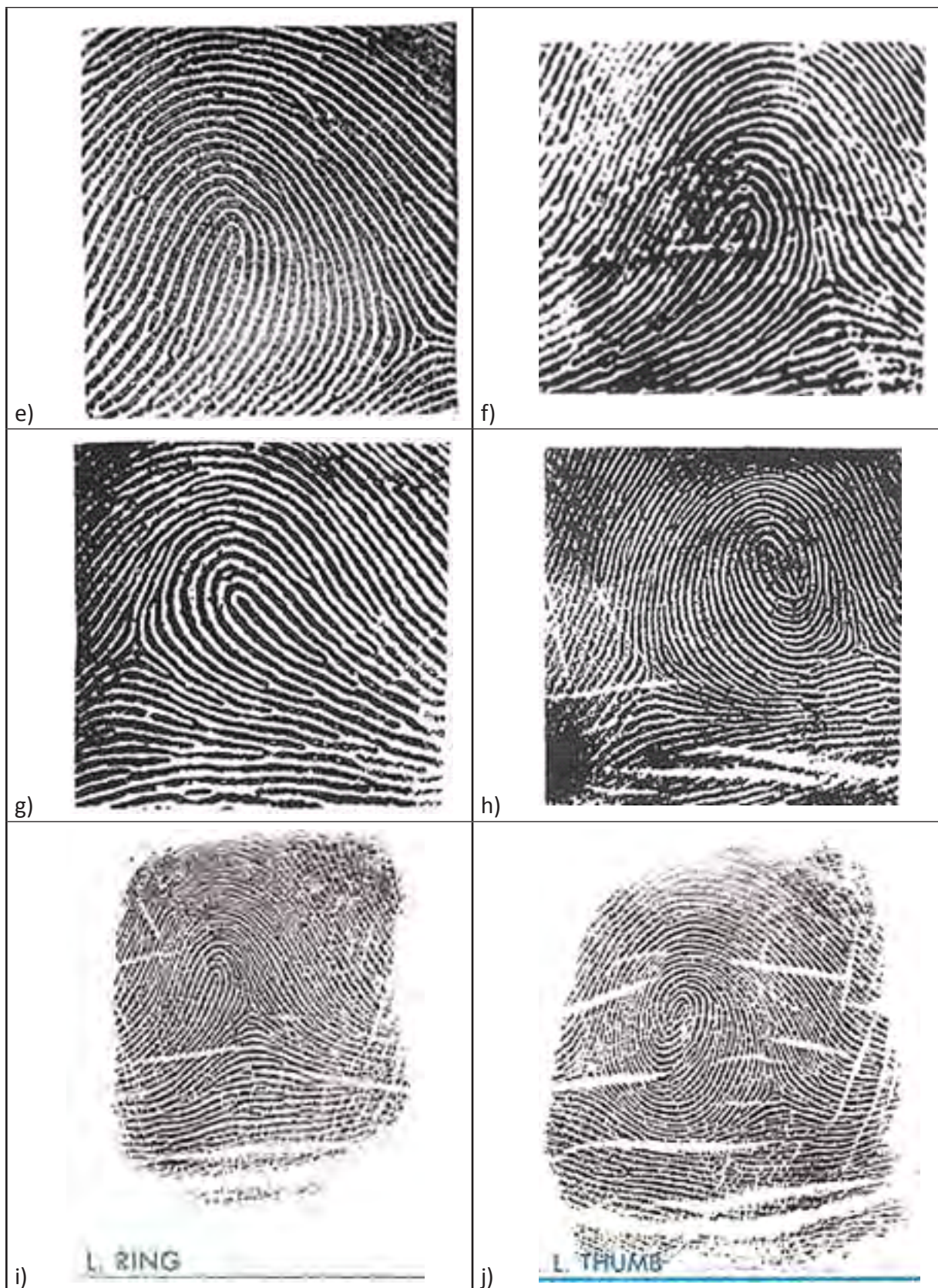
Further Description:

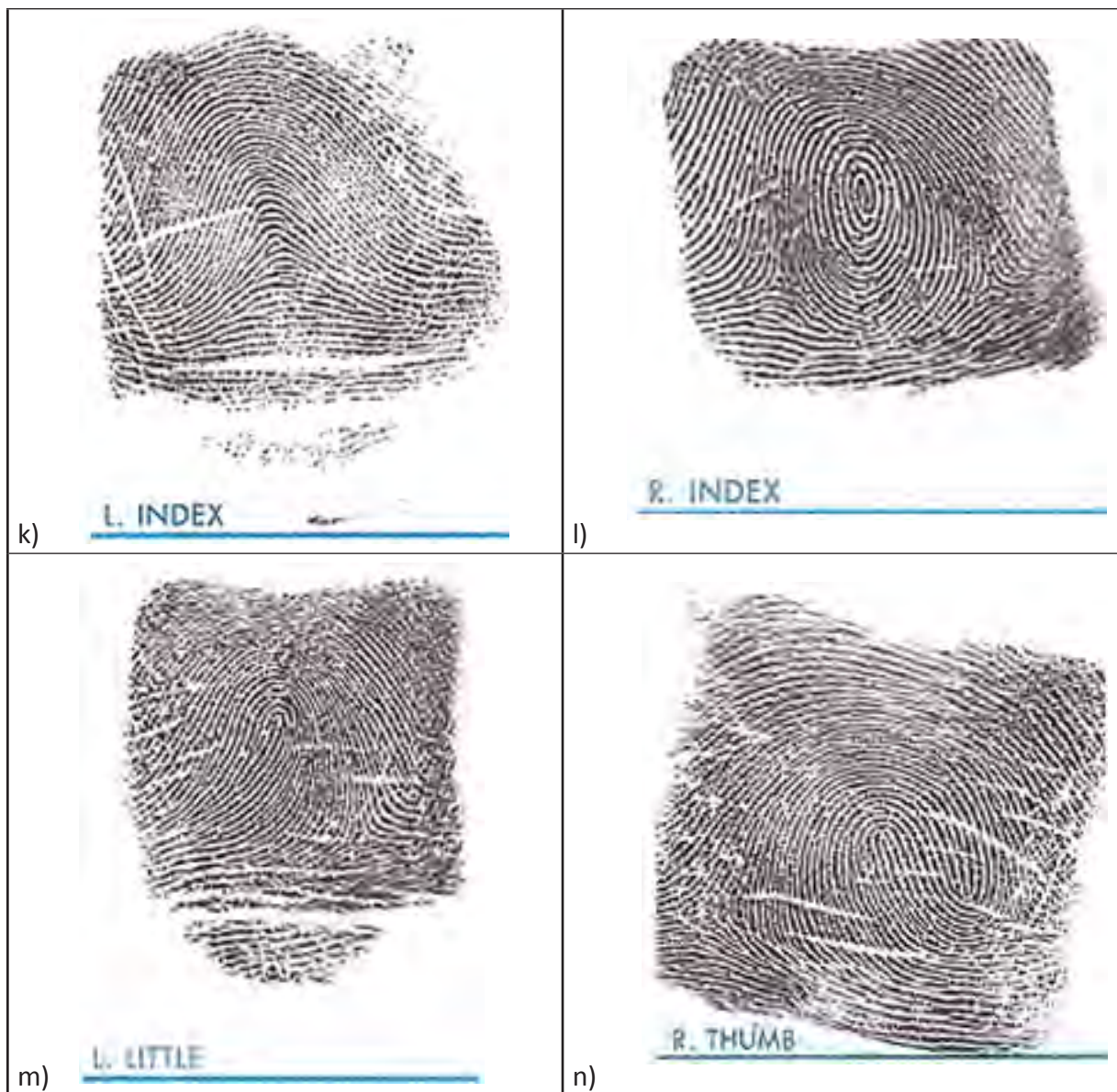
- If loop: determine ridge count: (1–50)
- If whorl: determine tracing (inner, meet, outer) and the number of ridges between the delta and tracing (1–15)

- If arch: no further description is required

Fingerprints







Exercise 2: FBI Cards

In this exercise, you will create a full-set FBI fingerprint card.

1. Gather the magnifying glass from your LabPaq and use as necessary.
2. Gather an ink pad strip, sheet of white paper, an FBI fingerprint card, and a volunteer to help you.

Note: *There are four FBI fingerprint cards provided in your Labpaq. The goal of this exercise is to create one full-set FBI fingerprint card. The three additional cards for this assignment are provided in case you make a mistake on a card.*

3. Place the ink pad strip on the white paper and peel it apart into two pieces, exposing the ink. See Figure 21.

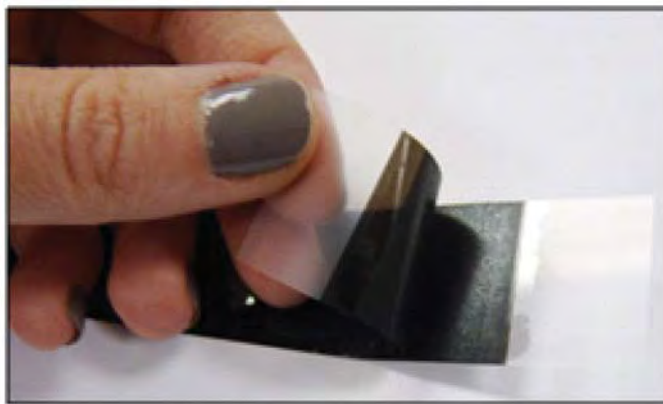


Figure 21: Ink pad strip.

4. Place one-half of the ink pad flat on the sheet of white paper.
5. Hold the right thumb of your volunteer.
6. Place the finger on the ink and full-roll it through the ink, as shown and described in Figure 22.



Figure 22: Inking the finger. **(Left)** Place the left end of the volunteer's finger firmly onto the ink, using your hand to create gentle pressure. **(Middle)** Maintain gentle pressure on the finger and roll it along the ink until the middle of the finger is pressed into the ink. **(Right)** Maintain gentle pressure on the finger and roll it along the ink until the right end of finger has contacted and become coated in the ink.

Note: When the finger is properly inked, it should appear as a large rectangle of ink covering the finger from left to right and from nail to joint.

7. On the corresponding location on the FBI Fingerprint Card, create a patent print of the right thumb by rolling the ink-covered finger from side-to-side (only once!) onto the paper while applying even pressure, as shown in Figure 23.

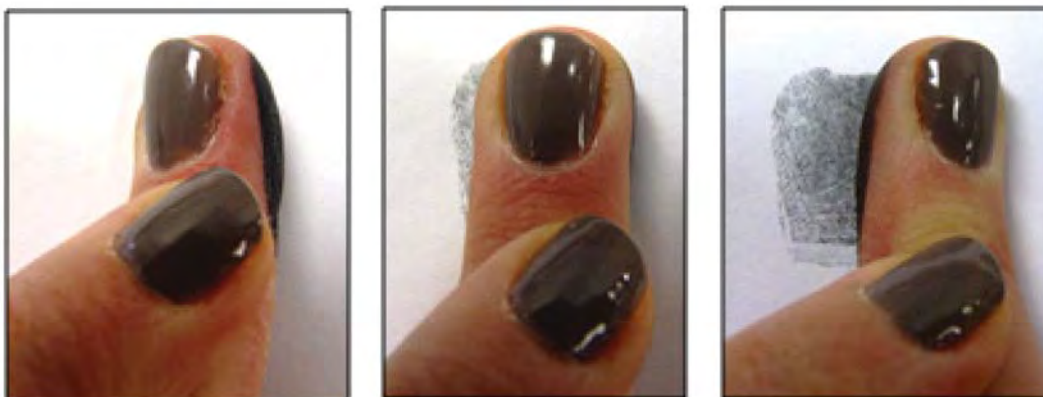


Figure 23: Printing the finger. **(Left)** Place the left edge of the volunteer's finger firmly onto the FBI card, and use your hand to create gentle pressure. **(Middle)** Maintain gentle pressure on the finger and roll it along the FBI card until the middle of finger is pressed into the card. **(Right)** Maintaining gentle pressure on the finger, roll it along the FBI card until the right edge of the finger has contacted and created a full print.

Note: When the fingerprint is properly rolled, it should appear as a large rectangle of ink on the paper, showing detail of the skin ridge pattern.

Note: You can easily remove the ink from fingers with soap and water.

8. Repeat steps 5 through 7 for the remaining nine fingers of the volunteer.
9. On the FBI fingerprint card, simultaneously create prints of the left four fingers, left thumb, right four fingers, and right thumb of your volunteer, as shown in the bottom row of Figure 19.
10. Have your volunteer wash their hands with soap and water.
11. On the FBI fingerprint card, fill in the following information for your volunteer: Name (first, middle, last), aliases (if possible), date, sex, height, weight, eye color, hair color, and place of birth. Next, have both yourself and your volunteer sign the FBI card in the specified location.
12. Photograph the completed FBI fingerprint card and insert the digital photograph into Photo Table 1, located in the Report Form.

Photo Table I. FBI fingerprint card

Exercise 3: NCIC and Henry classification systems

In this exercise, you will become familiar working with both the NCIC and Henry fingerprint classification systems.

1. A criminal suspect has been full-set fingerprinted at a local police station and their classified prints are provided in Table 5. Using this classification, determine the NCIC Classification for this criminal suspect and record it in Data Table 2.

Table 5. Criminal suspect's fingerprint classification.	
Finger:	Print Classification:
Right Thumb	Plain Whorl – Inner Tracing
Right Index	Tented Arch
Right Middle	Accidental Whorl – Meet Tracing
Right Ring	Ulnar Loop – 22 Ridges
Right Little	Suspect is missing this finger
Left Thumb	Radial Loop – 7 Ridges
Left Index	Double Loop Whorl – Outer Tracing
Left Middle	Plain Arch
Left Ring	Plain Whorl – Outer Tracing
Left Little	Ulnar Loop – 1 Ridge

Data Table 2: NCIC classification of criminal suspect.												
Code:												
Finger:	Right Thumb	Right Index	Right Middle	Right Ring	Right Little	Left Thumb	Left Index	Left Middle	Left Ring	Left Little		

2. Determine the primary Henry fingerprint classification for the criminal suspect and record in Data Table 3.

Data Table 3: Primary Henry fingerprint classification of criminal suspect.	
Primary Henry classification:	

3. Convert the five NCIC fingerprint classification codes, provided in Data Table 4 to the primary Henry classification. Record the primary Henry classifications in Data Table 4, next to their corresponding NCIC codes.

Data Table 4: NCIC to Henry conversions.	
NCIC fingerprint classification codes:	Henry classifications (primary):
COPO13PO17DIDI13PI18	
14PI12PO161513PIPI18	
POPIPOPM22PIDIDIPM19	
DO1821POPOPIPO20PI15	
PM14141313PM141716	

Exercise 4: The FBI needs help!

In this exercise, you will help the FBI match NCIC fingerprint classification codes to FBI full-set fingerprint cards, and will then create NCIC fingerprint classification codes for two full-set fingerprint cards.

1. A police station has a serious problem on its hands. It recently created FBI fingerprint cards for six criminal suspects. It hired an experienced fingerprint analyst to determine the NCIC fingerprint classification codes for each of the cards. However, there was a mix-up at the police station and the NCIC fingerprint classification codes were separated from the FBI fingerprint cards and they need to be re-matched. Additionally, one of the FBI Fingerprint Cards was misplaced, so there is one more NCIC code than FBI fingerprint card.
2. Review the NCIC codes provided in Table 6.

Table 6. NCIC fingerprint classification codes from multiple suspects.	
NCIC Code Number	NCIC Fingerprint Classification codes
101	1712081007DI06081209
102	24030711101304141010
103	DODIDIPM23DIDODOPI21
104	02AAAA0504AAAAAAAAAAAA
105	6762581007PM06586209
106	PMAT100308PMAA060610

3. Match the NCIC Code Numbers in Table 6, to the correct FBI Fingerprint Card Number, provided below. Record the correct matches in Data Table 5.








































Note: The FBI Fingerprint Cards are shown below, but are also available on your LabPaq CD for you to view with ease. Zoom-in to view the fine details of these fingerprint images.

Data Table 5: Matching codes to FBI fingerprint cards.	
NCIC Code Number	FBI Fingerprint Card Number
101	
102	
103	
104	
105	
106	











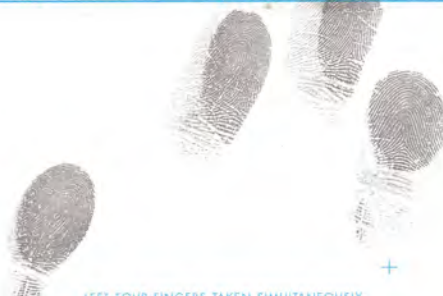



Note: One of the NCIC code numbers in Data Table 5 will not have a matching FBI fingerprint card.

Note: There is no longer a CD included in the Hands-On Lab LabPaq.







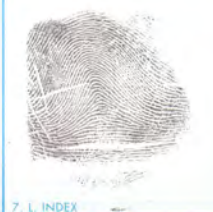





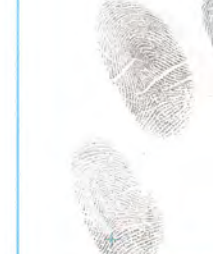

FBI Fingerprint Card

APPLICANT		LEAVE BLANK		TYPE OR PRINT ALL INFORMATION IN BLACK				FBI		LEAVE BLANK																
				LAST NAME <u>NAM</u>		FIRST NAME		MIDDLE NAME																		
SIGNATURE OF PERSON FINGERPRINTED		ALIASES <u>AKA</u>		OR 1 DC000000Z CJIS-WV-DO-REQ CLARKSBURG, WV				DATE OF BIRTH <u>DOB</u>		Month Day Year																
RESIDENCE OF PERSON FINGERPRINTED								PLACE OF BIRTH <u>POB</u>																		
DATE	SIGNATURE OF OFFICIAL TAKING FINGERPRINTS	CITIZENSHIP <u>CTZ</u>		SEX	RACE	HGT	WGT	EYES	HAIR																	
EMPLOYER AND ADDRESS		YOUR NO. <u>OCA</u> <u>3</u>		FBI NO. <u>FBI</u>						LEAVE BLANK																
REASON FINGERPRINTED		ARMED FORCES NO. <u>MNU</u>		SOCIAL SECURITY NO. <u>SOC</u>						CLASS _____																
		MISCELLANEOUS NO. <u>MNU</u>								REF. _____																
<table border="1"> <tr> <td> 1. R. THUMB</td> <td> 2. R. INDEX</td> <td> 3. R. MIDDLE</td> <td> 4. R. RING</td> <td> 5. R. LITTLE</td> </tr> <tr> <td> 6. L. THUMB</td> <td> 7. L. INDEX</td> <td> 8. L. MIDDLE</td> <td> 9. L. RING</td> <td> 10. L. LITTLE</td> </tr> <tr> <td colspan="2"> LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY</td> <td> L. THUMB R. THUMB</td> <td colspan="2"> RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY</td> </tr> </table>												 1. R. THUMB	 2. R. INDEX	 3. R. MIDDLE	 4. R. RING	 5. R. LITTLE	 6. L. THUMB	 7. L. INDEX	 8. L. MIDDLE	 9. L. RING	 10. L. LITTLE	 LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY		 L. THUMB R. THUMB	 RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY	
 1. R. THUMB	 2. R. INDEX	 3. R. MIDDLE	 4. R. RING	 5. R. LITTLE																						
 6. L. THUMB	 7. L. INDEX	 8. L. MIDDLE	 9. L. RING	 10. L. LITTLE																						
 LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY		 L. THUMB R. THUMB	 RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY																							



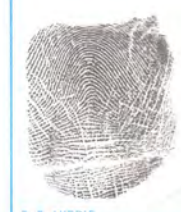








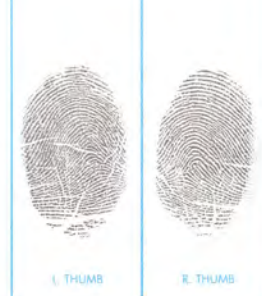

APPLICANT		LEAVE BLANK		TYPE OR PRINT ALL INFORMATION IN BLACK				FBI		LEAVE BLANK	
				LAST NAME	FIRST NAME	MIDDLE NAME					
SIGNATURE OF PERSON FINGERPRINTED		ALIASES <u>AKA</u>		OR I		DC000000Z				DATE OF BIRTH <u>DOB</u> Month Day Year	
RESIDENCE OF PERSON FINGERPRINTED						CJIS-WV-DO-REQ					
						CLARKSBURG, WV					
DATE	SIGNATURE OF OFFICIAL TAKING FINGERPRINTS	CITIZENSHIP <u>CTZ</u>	SEX	RACE	HGT	WGT	EYES	HAIR	PLACE OF BIRTH <u>POB</u>		
EMPLOYER AND ADDRESS		YOUR NO. <u>OCA</u> 7	LEAVE BLANK								
		FBI NO. <u>FBI</u>	CLASS _____								
		ARMED FORCES NO. <u>MNU</u>	REF _____								
REASON FINGERPRINTED		SOCIAL SECURITY NO. <u>SOC</u>									
		MISCELLANEOUS NO. <u>MNU</u>									

 1. R. THUMB	 2. R. INDEX	 3. R. MIDDLE	 4. R. RING	 5. R. LITTLE
 6. L. THUMB	 7. L. INDEX	 8. L. MIDDLE	 9. L. RING	 10. L. LITTLE
 LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY		 L. THUMB	 R. THUMB	 RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY

APPLICANT		LEAVE BLANK		TYPE OR PRINT ALL INFORMATION IN BLACK				FBI		LEAVE BLANK	
				LAST NAME	FIRST NAME	MIDDLE NAME					
SIGNATURE OF PERSON FINGERPRINTED				ALIASES <u>AKA</u>		OR I		DC000000Z			
RESIDENCE OF PERSON FINGERPRINTED								CJIS-WV-DO-REQ		DATE OF BIRTH <u>DOB</u> Month Day Year	
DATE		SIGNATURE OF OFFICIAL TAKING FINGERPRINTS		CITIZENSHIP <u>CTZ</u>		SEX		RACE	HGT	WGT	EYES
EMPLOYER AND ADDRESS				YOUR NO. <u>OCA</u> 8						PLACE OF BIRTH <u>POB</u>	
REASON FINGERPRINTED				FBI NO. <u>FBI</u>						LEAVE BLANK	
				ARMED FORCES NO. <u>MNU</u>						CLASS	
				SOCIAL SECURITY NO. <u>SOC</u>						REF	
				MISCELLANEOUS NO. <u>MNU</u>							

 1. R. THUMB	 2. R. INDEX	 3. R. MIDDLE	 4. R. RING	 5. R. LITTLE
 6. L. THUMB	 7. L. INDEX	 8. L. MIDDLE	 9. L. RING	 10. L. LITTLE
 LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY		 L. THUMB	 R. THUMB	 RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY

APPLICANT		LEAVE BLANK		TYPE OR PRINT ALL INFORMATION IN BLACK				FBI		LEAVE BLANK	
				LAST NAME <u>NAM</u>		FIRST NAME		MIDDLE NAME			
SIGNATURE OF PERSON FINGERPRINTED		ALIASES <u>AKA</u>		O R I G I N A L I D E N T I F I C A T I O N N U M B E R DC000000Z CJIS-WV-DO-REQ CLARKSBURG, WV				DATE OF BIRTH <u>DOB</u>		Month Day Year	
RESIDENCE OF PERSON FINGERPRINTED											
DATE		SIGNATURE OF OFFICIAL TAKING FINGERPRINTS		CITIZENSHIP <u>CTZ</u>		SEX		RACE		HGT	
EMPLOYER AND ADDRESS				YOUR NO. <u>OCA</u> 9		WGT		EYES		HAIR	
REASON FINGERPRINTED				FBI NO. <u>FBI</u>						PLACE OF BIRTH <u>POB</u>	
				ARMED FORCES NO. <u>MNU</u>							
				SOCIAL SECURITY NO. <u>SOC</u>							
				MISCELLANEOUS NO. <u>MNU</u>							
				LEAVE BLANK							
				CLASS _____							
				REF. _____							

									
1. R. THUMB		2. R. INDEX		3. R. MIDDLE		4. R. RING		5. R. LITTLE	
									
6. L. THUMB		7. L. INDEX		8. L. MIDDLE		9. L. RING		10. L. LITTLE	
 LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY				 L. THUMB R. THUMB		 RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY			

APPLICANT		LEAVE BLANK		TYPE OR PRINT ALL INFORMATION IN BLACK				FBI		LEAVE BLANK	
				LAST NAME	FIRST NAME	MIDDLE NAME					
SIGNATURE OF PERSON FINGERPRINTED		ALIASES <u>AKA</u>		OR I		DC000000Z		CJIS-WV-DO-REQ		DATE OF BIRTH <u>DOB</u> Month Day Year	
RESIDENCE OF PERSON FINGERPRINTED		CITIZENSHIP <u>CTZ</u>		SEX		RACE	HGT	WGT	EYES	HAIR	PLACE OF BIRTH <u>POB</u>
DATE	SIGNATURE OF OFFICIAL TAKING FINGERPRINTS	YOUR NO. <u>OCA</u>		14		LEAVE BLANK					
EMPLOYER AND ADDRESS		FBI NO. <u>FBI</u>		ARMED FORCES NO. <u>MNU</u>		CLASS _____					
REASON FINGERPRINTED		SOCIAL SECURITY NO. <u>SOC</u>		MISCELLANEOUS NO. <u>MNU</u>		REF _____					

- When reviewing the case, the police department identified two additional suspects. They have come to the police station and have had FBI fingerprint cards created. However, the experienced fingerprint analyst is curious to see how you do at creating the NCIC fingerprint classification and primary Henry fingerprint classification codes for the two cards.
- Create the NCIC and primary Henry fingerprint classification codes for FBI fingerprint card 10 and FBI fingerprint card 15. Record your answers in Data Table 6.

Note: The FBI fingerprint cards are shown below, but are also available on your LabPaq CD for you to view with ease.


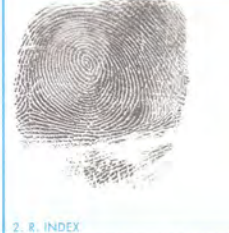




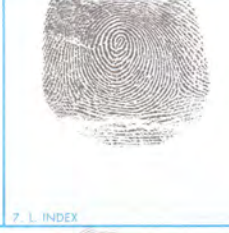
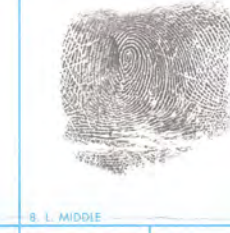






Note: There is no longer a CD included in the Hands-On Lab LabPaq.

Data Table 6: Creating NCIC and primary Henry Fingerprint Classification Codes















FBI Fingerprint Card Number	NCIC Fingerprint Classification code	Henry Classification (primary)
(10)		
(15)		

- After completing the exercise and viewing FBI cards 10 and 15, clean all materials and return them to your LabPaq box.

APPLICANT		LEAVE BLANK		TYPE OR PRINT ALL INFORMATION IN BLACK						FBI		LEAVE BLANK	
				LAST NAME	FIRST NAME	MIDDLE NAME							
SIGNATURE OF PERSON FINGERPRINTED				ALIASES <u>AKA</u>		OR		DC000000Z					
RESIDENCE OF PERSON FINGERPRINTED								CJIS-WV-DO-REQ				DATE OF BIRTH <u>DOB</u> Month Day Year	
DATE		SIGNATURE OF OFFICIAL TAKING FINGERPRINTS		CITIZENSHIP <u>CTZ</u>		SEX		RACE	HGT	WGT	EYES	HAIR	PLACE OF BIRTH <u>POB</u>
EMPLOYER AND ADDRESS				YOUR NO. <u>OCA</u>		10		LEAVE BLANK					
REASON FINGERPRINTED				FBI NO. <u>FBI</u>				CLASS _____					
				ARMED FORCES NO. <u>MNU</u>				REF. _____					
				SOCIAL SECURITY NO. <u>SOC</u>									
				MISCELLANEOUS NO. <u>MNU</u>									

 1. R THUMB	 2. R INDEX	 3. R MIDDLE	 4. R RING	 5. R LITTLE	
 6. L THUMB	 7. L INDEX	 8. L MIDDLE	 9. L RING	 10. L LITTLE	
 LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY		 L THUMB	 R THUMB	 RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY	

APPLICANT		LEAVE BLANK		TYPE OR PRINT ALL INFORMATION IN BLACK		FBI		LEAVE BLANK	
				LAST NAME	FIRST NAME	MIDDLE NAME			
SIGNATURE OF PERSON FINGERPRINTED		ALIASES <u>AKA</u>		OR DC000000Z CJIS-WV-DO-REQ CLARKSBURG, WV		DATE OF BIRTH <u>DOB</u> Month Day Year		PLACE OF BIRTH <u>POB</u>	
RESIDENCE OF PERSON FINGERPRINTED									
DATE	SIGNATURE OF OFFICIAL TAKING FINGERPRINTS	CITIZENSHIP <u>CTZ</u>		SEX	RACE	HGT	WGT	EYES	HAIR
EMPLOYER AND ADDRESS		YOUR NO. <u>OCA</u> 15		LEAVE BLANK CLASS _____ REF. _____					
		FBI NO. <u>FBI</u>							
		ARMED FORCES NO. <u>MNU</u>							
		SOCIAL SECURITY NO. <u>SOC</u>							
REASON FINGERPRINTED		MISCELLANEOUS NO. <u>MNU</u>							

 1 R THUMB	 2 R INDEX	 3 R MIDDLE	 4 R RING	 5 R LITTLE
 6 L THUMB	 7 L INDEX	 8 L MIDDLE	 9 L RING	 10 L LITTLE
 LEFT FOUR FINGERS TAKEN SIMULTANEOUSLY		 L THUMB	 R THUMB	 RIGHT FOUR FINGERS TAKEN SIMULTANEOUSLY