

# Fingerprints

Name: \_\_\_\_\_

## 1. Fingerprint Principles

According to criminal investigators, fingerprints follow 3 fundamental principles:

1. A fingerprint is an \_\_\_\_\_ characteristic; no two people have been found with the \_\_\_\_\_ same fingerprint pattern.
2. A fingerprint pattern will remain \_\_\_\_\_ for the \_\_\_\_\_ of an individual.
3. Fingerprints have general characteristic \_\_\_\_\_ patterns that allow them to be systematically identified.

## 2. Fingerprint Classes

There are 3 specific classes for all fingerprints based upon their visual \_\_\_\_\_ arches, loops, and whorls. Each group is divided into smaller groups as seen in the list below.

_____	_____	_____	Loops = _____
Plain	Radial	Plain	Whorls = _____
Tented	Ulnar	Central pocket	Arches = _____
		Double loop	
		Accidental	

## 3. Examples

**Arches** are the simplest type of fingerprints that are formed by ridges that enter on one \_\_\_\_\_ of the print and exit on the \_\_\_\_\_. No \_\_\_\_\_ are present.



\_\_\_\_\_ Arch  
Ridges enter on one side and exit on the other side.



\_\_\_\_\_ Arches  
Similar to the plain arch, but has a spike in the center.

**Loops** must have one \_\_\_\_\_ and one or more \_\_\_\_\_ that enter and leave on the same side. These patterns are named for their positions related to the \_\_\_\_\_ and \_\_\_\_\_ bones.

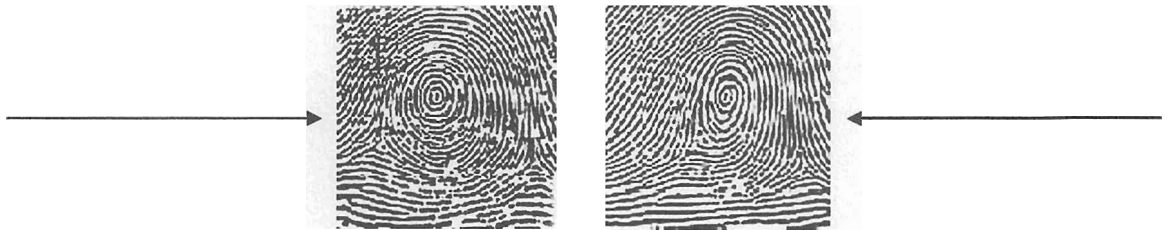
\_\_\_\_\_ Loop  
Loop opens toward the thumb or radius bone on the right hand.



\_\_\_\_\_ Loop  
Loop opens toward the little finger or the ulna bone on the right hand.

**Whorls** have at least one \_\_\_\_\_ that makes (or tends to make) a complete \_\_\_\_\_. They also have at least \_\_\_\_\_ deltas. If a print has more than two deltas, it is most likely an \_\_\_\_\_.

Draw a line between the two deltas in the plain and central pocket whorls shown below. If some of the curved ridges touch the line, it is a plain whorl. If none of the center core touches the line, it is a central pocket whorl. Label each fingerprint below.



\_\_\_\_\_ whorls are made up of any two loops combined into one print.



\_\_\_\_\_ whorls contain two or more patterns (not including the plain arch), or does not clearly fall under any of the other categories.

**4. Identify each fingerprint pattern shown on the class notes.**

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_
- D. \_\_\_\_\_
- E. \_\_\_\_\_

**5. Follow your teacher's directions to document your fingerprints on the My Prints worksheet. Use your notes and a magnifying glass to identify the pattern in each one.**



# Fingerprint Ridge Patterns

## Arches



Plain Arch



Tented Arch

## Loops



Radial Arch

Right Hand



Ulnar Arch

## Whorls



Plain Whorl



Central Pocket Whorl



Double Loop

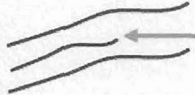


Accidental

# Fingerprint Ridge Characteristics



Core



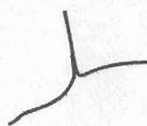
Ending Ridge



Short Ridge



Fork or Bifurcation



Delta



Hook



Eye



Dot or Island



Crossover



Bridge



Enclosures



Specialty