FINGERPRINT ANALYSIS TEAM

BACKGROUND:

In many cases, fingerprints found at a crime scene are usually partial, broken, smeared, or otherwise inferior to the perfect specimens seen on tv crime shows. However, examiners are able to use points of comparison, also called *points of identification*, to compare unknown fingerprints against known specimens. On a basic level, there are two types of fingerprints:

Patent Fingerprints are prints that are visible to the naked eye under ordinary light and come in two varieties:

- *Visible fingerprints*: created by touching a surface after having been in contact with ink, paint, grease, soot, or some similar substance.
- *Plastic fingerprints*: left on an impressionable material such as wet paint, modeling clay, tar, putty, wax, or some similar material.

Latent Fingerprints are prints that are visible to the naked eye under ordinary light, but can be made visible by *dusting* or with an *alternate* light source.

PART I: GATHERING EVIDENCE

Your team will carefully and thoroughly search your assigned area for fingerprints left at the crime scene. Some prints require **dusting,** others require **lifting**, and some prints may require both processes. The best approach is to first locate all possible prints, then consult with your fellow investigators as to how to approach each set of prints (dust, lift or both?). Pay attention to common objects and surface areas that people touch most often (e.g. windowpanes, drinking glasses, etc.). Continue gathering evidence until your team has found anywhere from **3 – 4 different** types of prints. Be sure to note the evidence in your EVIDENCE LOG and observe the following protocol:

- ✓ Wear gloves, lab coats, and shoe covers before entering the crime scene.
- ✓ When locating evidence, **carefully** remove the specimen and place it in an evidence bag (if possible).
- ✓ After locating evidence, note all details in your EVIDENCE LOG.
- ✓ Check the bottoms of your shoe covers for evidence that you may have accidentally stepped on or missed.

PART II: LATENT FINGERPRINTS

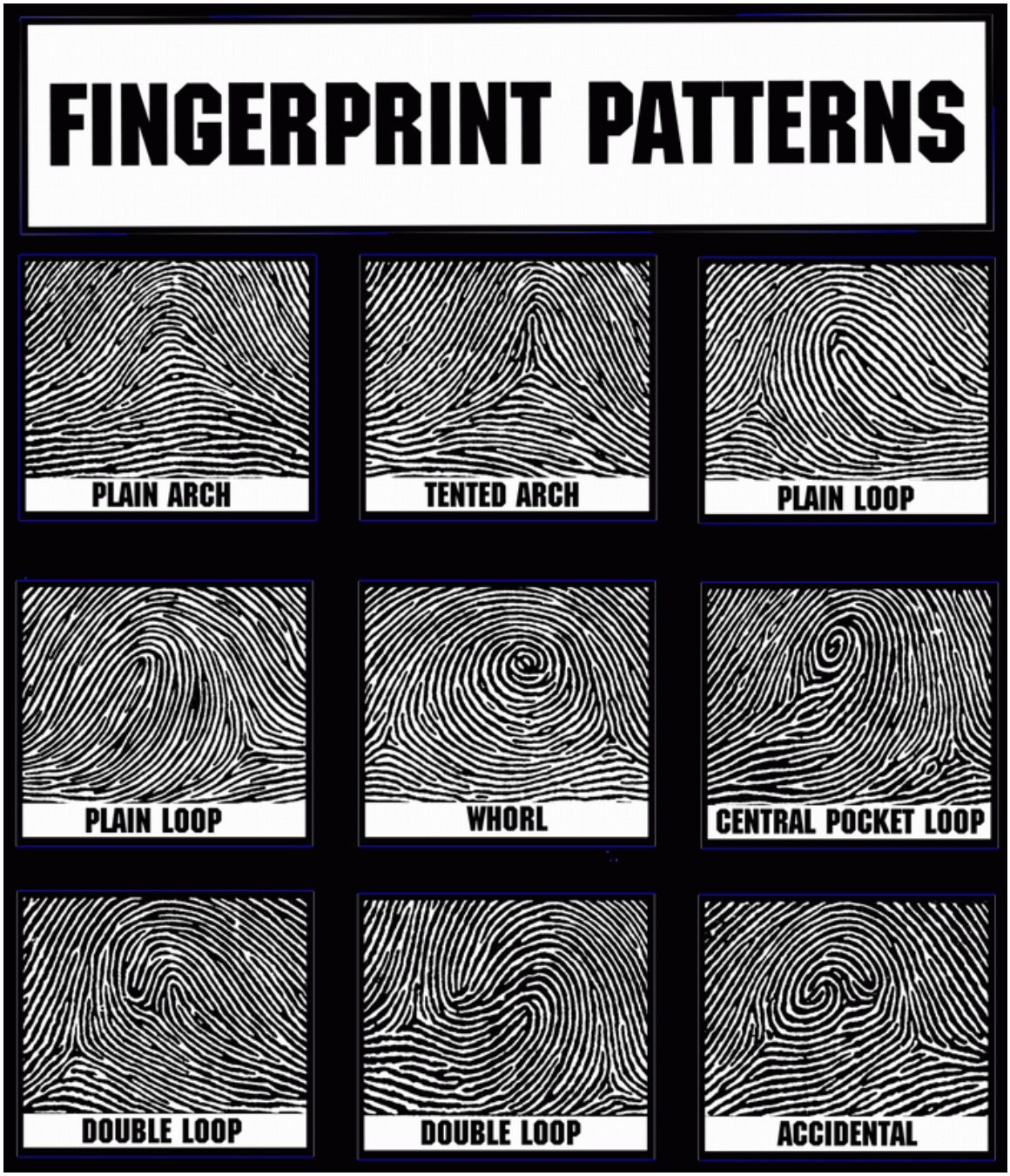
DUSTING FINGERPRINTS

1. Wearing gloves and being careful not to damage any latent prints, observe the prints using an alternative lighting source (e.g. a flashlight).
2. Choose the fingerprint dusting powder that will provide contrast to the prints you are examining.
3. Using your dusting brush, dip just the tips of the bristles into the powder so that a small amount of powder is retained by the bristles.
4. Allowing the bristles to **just barely** touch the surface, move the brush in a circular, twirling motion.
5. Continue depositing powder lightly until latent fingerprints develop.

LIFTING FINGERPRINTS

1. Wearing gloves, remove a piece of lifting tape while being careful **not to touch** the sticky surface of the tape.
2. Press the sticky part of the tape onto the surface of the prints.
3. Make sure the tape adheres firmly to the surface without air bubbles.
4. **In one smooth motion**, peel the tape from the surface and carefully press it to a transfer card.
5. Label the transfer card with the area/object where the prints were found and note it in your EVIDENCE LOG.

On the next page, answer the analysis questions using both the Fingerprint Patterns guide (below) and the information in the Background section.



a. Were the fingerprints you found patent or latent? If patent, then were they visible or plastic?

_____
_____
_____
_____

b. Is dusting better suited for porous or nonporous surfaces? Why?

_____
_____
_____
_____

c. What fingerprint patterns are you able to discern from your gathered specimens?

_____
_____
_____
_____

d. Did all of your team's specimens develop clearly? Why/Why not?

_____
_____
_____
_____

PART III: REVIEW THE POLICE REPORTS

Over the next few pages, your team will need to review the official police report of the crime as well as witness interviews. Some witness accounts will contradict others so it's your job to determine, based on your understanding of the evidence your team collected, who could be an innocent bystander and who could be a suspect.

DO NOT CONVERSE WITH OTHER ANALYSIS TEAMS AT THIS TIME!

You must form your own conclusions as a team first. If it helps, use the following analysis techniques:

- ✓ Note the WHO, WHAT, WHERE, and WHEN of the witness accounts.
- ✓ What are the relationships between witnesses?
- ✓ Create a timeline of where witnesses were at the time of the crime.

Use this space for notes and brainstorming…

PART IV: CONSULT YOUR PEERS

As a team, consult with **one** other analysis team that you feel may enhance your investigation (e.g. Hair and Fiber Analysis). Ask and answer the following questions:

Analysis team being consulted? _____

What physical evidence did this team gather? _____

What techniques did this team use to analyze their evidence?

_____
_____
_____

What conclusions did this team arrive at? Why?

_____
_____
_____

After consulting with the other analysis team, how does this change your original conclusions? Why?

_____
_____
_____

PART V: CONCLUDING ANALYSIS

As soon as everyone has had a chance to converse with other investigative teams, we will all gather together and draw our final conclusions.