

## Individualized vs. Identified Evidence Notes

### Observation Skills Questions

1.

2.

3.

4.

### Commercial Activity

#### Individualized Evidence:

Examples:

#### Identified Evidence:

Examples:

TV Show Examples:

Individualized Evidence	Identified Evidence

**Physical Evidence Notes**

Name \_\_\_\_\_

1. The value of trace forensic evidence was first recognized by Edmund \_\_\_\_\_ in 1910. The Locard's Exchange Principle states that "with \_\_\_\_\_ between two items, there will be an \_\_\_\_\_."

2. Complete each section below as you discuss the notes in class.

**Paint**

What is an example of a "class" characteristic? \_\_\_\_\_

What is an example of an "individual" characteristic? \_\_\_\_\_

**Glass**

What are three characteristics of glass that could be used to match glass from a crime scene to a suspect?

\_\_\_\_\_

**Explosives**

How do scientists match bombs and other explosive devices to suspects? \_\_\_\_\_

\_\_\_\_\_

**Ballistics**

What does the abbreviation GSR represent? \_\_\_\_\_

What is rifling? \_\_\_\_\_

What does the acronym IBIS mean? \_\_\_\_\_

**Dust & Dirt**

How could dust or dirt be used in an investigation? \_\_\_\_\_

\_\_\_\_\_

**Fingerprints**

What are the 3 main types of fingerprints? \_\_\_\_\_

What does the acronym AFIS mean? \_\_\_\_\_

**Impression Evidence**

Give 3 examples of impression evidence. \_\_\_\_\_

**Fractures Matches**

What are fracture lines? \_\_\_\_\_

Give an example of a type of evidence that might be identified using a fracture match. \_\_\_\_\_

**Wounds**

What information can be learned from a wound? \_\_\_\_\_

\_\_\_\_\_

**Documents**

Besides handwriting, what else could an investigator use to match a ransom note to a suspect? \_\_\_\_\_  
\_\_\_\_\_

**Insects**

What type of insects are helpful in a murder investigation? \_\_\_\_\_

What is PMI? \_\_\_\_\_

**DNA**

What types of tissues might be used for DNA testing? \_\_\_\_\_

What does the acronym CODIS mean? \_\_\_\_\_

**Skeletal Remains**

What 4 things can be determined from skeletal remains? \_\_\_\_\_

What type of scientist studies skeletal remains? \_\_\_\_\_

**Body Fluids**

What type of clues could investigators get from body fluid samples? Give two examples.

\_\_\_\_\_

**Hairs & Fibers**

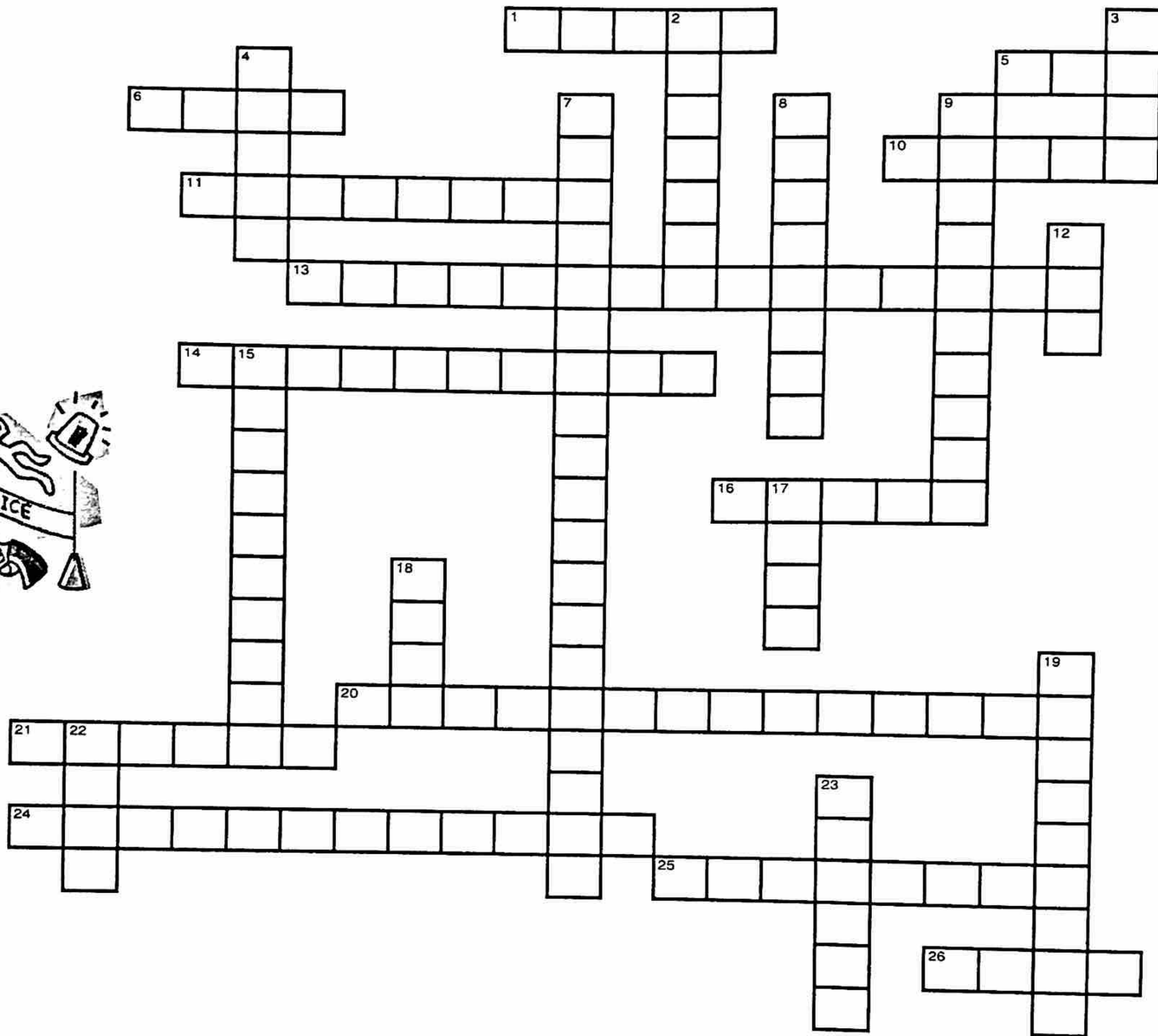
How can hairs and fibers be used in an investigation? \_\_\_\_\_

\_\_\_\_\_

What must be present in a hair sample to test for DNA? \_\_\_\_\_

# Power of Evidence Unit Review

Name \_\_\_\_\_



## Across

1. Can be matched to a weapon and analyzed to determine a weapon's size, shape, or length as well as clues about the victim or suspect
5. Genetic material that can be extracted from body tissues and used to create a profile to identify a victim or suspect
6. Bottom portion of hair in which nuclear DNA can be found
10. The universal solvent
11. Points on a fingerprint where the ridge structure changes, such as forks, bridges, and deltas
13. Can be analyzed to determine the sex, stature, age, and race of a victim
14. Instrument used to examine hairs & fibers in detail
16. Can be analyzed to determine its properties, such as color, tint, thickness, density, chemical composition, and refractive index (RI).
20. Process of separating a mixture into its individual components, such as determining the compounds in gasoline
21. Type of print left on a surface at a crime scene, such as a tool handle, glass, door, etc.
24. Can be classified as loops, whorls, and arches
25. Forms when an object is torn or broken; edges can be examined to see if they match
26. Database used to find matches to bullets or firearms found at a crime scene

## Down

2. Type of fiber made from plants or animals
3. Substance made of keratin and is composed of the cuticle, cortex, and medulla
4. Database that is used to find matches for DNA evidence gathered from a crime scene or victim
7. Examiners may analyze a this type of evidence to determine the type of paper used, printing method, handwriting style, or type of ink to find a match to a suspect
8. Substances that give color to objects, such as paint, hair, and fibers
9. Study of firearms and ammunition
12. Abbreviation for gunshot residue
15. Evidence that is formed as an object leaves a "mark" on another one, such as tire tracks, toolmarks, & bitemarks
17. Most common type of fingerprint pattern
18. Least common type of fingerprint pattern
19. Type of fiber that is man-made
22. Database that can be used to find matches for fingerprints found at a crime scene
23. Principle that states "with contact between two items, there will be an exchange."



# Power of Evidence Challenge

Name \_\_\_\_\_

**Unscramble each term, write it in the blanks, and then find it in the puzzle.**

HINT: All the words can be found on the Power of Evidence note worksheet!

P \_ \_ \_ \_  
PTIAN

S \_ \_ \_ \_ \_  
SVAIAL

G \_ \_ \_ \_  
GSASL

S \_ \_ \_  
SLOI

L \_ \_ \_ \_ \_  
LDOARC

W \_ \_ \_ \_  
WUNOD

T \_ \_ \_ T \_ \_ \_ \_  
TREI TRKACS

F \_ \_ \_ \_ \_  
FURCARET

M \_ \_ \_ \_ \_ \_  
MCRIEPOCSO

T \_ \_ \_ \_ E \_ \_ \_ \_ \_  
TARCE ENVCEDI

H \_ \_ \_  
HARI

B \_ \_ \_ \_  
BLDOO

B \_ \_ \_ \_  
BETI MSKRA

T \_ \_ \_ \_  
TOLOMRAKS

B \_ \_ \_ \_  
BLILTSIASC

F \_ \_ \_  
FSEBRI

E \_ \_ \_ \_  
EIEXSLVSP

S \_ \_ \_ \_  
SHSORTIPNE

G \_ \_  
GRS

H \_ \_ \_ \_  
HITNGWDANRI

O	J	T	M	L	H	Q	Q	E	W	W	Q	V	F	U	F	X	J	F
J	H	O	R	Q	X	Z	M	R	X	M	D	K	U	V	W	H	V	H
Z	V	O	L	M	W	T	I	C	P	M	D	N	U	O	W	V	Q	T
F	Z	L	C	A	V	A	U	L	F	U	L	B	N	P	M	T	N	B
R	R	M	F	S	H	B	Y	L	N	Y	L	O	V	U	C	E	N	Z
H	T	A	M	S	O	I	L	L	O	C	T	S	L	S	I	U	F	
H	X	R	C	M	F	P	F	B	O	X	S	A	V	I	Y	J	A	Z
T	G	K	L	T	Q	K	C	D	S	Y	P	K	E	H	V	Z	P	F
I	W	S	N	W	U	M	U	B	G	H	J	C	R	C	W	E	H	W
R	H	P	M	S	E	R	A	N	D	S	O	Z	B	A	L	G	S	I
E	W	T	F	N	R	Z	E	D	C	S	I	E	X	K	M	V	Q	N
T	W	F	L	V	E	V	I	I	G	Y	R	C	P	B	A	E	V	B
R	G	K	Y	A	R	X	T	M	J	Q	M	E	D	R	L	H	T	K
A	L	F	A	H	W	S	A	X	Y	V	D	V	B	W	I	G	L	I
C	A	B	D	E	I	C	O	P	M	X	W	A	W	I	F	N	T	O
K	S	B	H	L	D	W	T	L	P	M	Y	K	C	T	F	L	T	T
S	S	F	L	T	L	O	C	A	R	D	I	P	Z	F	H	N	O	S
M	J	A	V	F	Z	D	V	X	G	N	I	T	I	R	W	D	N	A
P	B	Q	E	P	O	C	S	O	R	C	I	M	F	S	A	L	I	V
K	R	R	S	G	T	R	A	C	E	E	V	I	D	E	N	C	E	U

## Physical Evidence Worksheet

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

*Directions: Read the case scenarios below and identify the transient, conditional, pattern, transfer and associative evidence. Some scenarios may have all types of evidence while others may only have a few.*

1. At 9pm on August 23, 2004, police investigators arrived at the scene of a possible arson. While doing a walk through of the crime scene, the investigators noticed the aroma of gasoline. The firefighters informed the investigators that the color of the flames was a dark red, which indicates that the temperature of the fire was about 975 °F. During the search of the crime scene the investigators found and collected a ring with the initials L. B. S. engraved on the inside, a shoe and tire impression.
2. A break and enter case was investigated by police investigators. The point of entry into the house was a window. Hair and fiber evidence was located on a tape fragment on the broken glass pane, which also had many fractures where it was broken. The window was open, the closet doors were all open and the furniture drawers were all pulled out and lying on the floor. The smell of cigarettes was noticed in the house even though the homeowners do not smoke.
3. The police were called to investigate a murder. At the crime scene was a large bloodstain pattern on the floor. Blood spatter was also on the walls. The front and back doors were both open when the police arrived at the scene. All of the lights were on in the house except for the room where the victim was located. A fingerprint was found on the door handle of the back door.
4. A body was found in the woods. Near the body were shoe impressions and a wallet that contained identification cards and credit cards. The body was covered with maggots and the investigators could smell the aroma of decomposition.

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

**Evidence Scenarios** : For each of the following scenarios, explain whether the evidence is direct, circumstantial, physical, biological, class, individual and/or trace. **Most scenarios will meet more than one category!**

**Highlight or circle the evidence then identify the type AND explain why it is that type.**  
**This paper has been spaced so you can write your answers directly next to the evidence. Write small!! 😊**

Scenario #1: Several red-colored cotton fibers are found upon the ledge of a window that had been broken to gain entry into a home. The home was then burglarized. A suspect wearing a torn red cotton jacket is apprehended nearby. Tests conducted later show that the fibers from the crime scene and the fibers from the suspect's jacket have identical physical properties.

Scenario #2: When the shoes seized from a break-and-enter suspect are examined, a small piece of glass is found embedded in the sole of one of the shoes. After analysis it was determined that the unique piece of glass came directly from the crime scene.

Scenario #3: One night a Hit & Run occurs in which a parked car is struck by another vehicle that lost control at an intersection. The suspect vehicle takes off after the collision. Although a license plate number was obtained at the time, it was noted by a witness that the suspect vehicle was a blue half-ton truck. Police officers find the broken half of a 'vanity plate' at the scene, and determine that it does not belong to the victim's car. Several hours after the collision, police officers find a damaged blue truck with a broken 'vanity plate', the remainder of which matched the fragments of plate found at the earlier collision.

Scenario #4: A victim's body surfaces nine months after being dumped in a lake. The body had been tied to cement rocks with a torn up bed sheet. It was determined that the victim was killed by hammer blows to the head. Forensic scientists were asked to determine if a certain hammer caused the unique markings on the skull. During the autopsy it was determined that the victim had been struck with a ballpeen hammer.

Scenario #5: A casing from a 7.65 mm bullet is found at the scene of a shooting. When this casing was compared to a casing obtained from the suspect's gun, the markings upon both bullet casings matched perfectly.



Scenario #6: A plaster cast of a faint shoe print is taken from the scene of a burglary. It is then compared to the tread of a suspect's shoe.

The shoe print found at the scene appears to match the tread of the suspect's right shoe.

Scenario #7: A plaster cast of a faint shoe print is taken from a burglary scene and of a suspect's shoe. The tread of the shoe print found at the scene appears to match the suspect's right shoe. Even the location of a staple stuck in the tread of the suspect's shoe matches the impression in the shoe print plaster.

Scenario #8: The body of a hit-and-run victim was found next to a major highway. A suspect vehicle was located and examined and an impression of a unique watch wristband found on the car's bumper matched the hit-and-run victim's watch wristband.

Scenario #9: A young boy was kidnapped and his parents were sent a stenciled ransom note. The stencil was later found at a suspect's home which matched the stenciled letters on the ransom note.

Scenario #10: A bite mark is found in a chunk of cheese left at a crime scene. When the bite mark was compared to the suspect's teeth it was found to match.

Scenario #11: Duct tape is used to bind a victim's hands. When the ripped end of this tape was compared to the end of a roll of tape found in the suspect's home, it was found to be an exact match.

Scenario #12: A ripped receipt for payment of a monthly bus pass purchased earlier in the month by a murder victim was compared with a piece of ripped receipt found in the suspect's home. The two pieces matched and thus were originally part of the same ticket.

Scenario #13: A child is missing from a local park. All that remains at the park (where the mother last saw the child) is the child's backpack. Small amounts of dog hair are found on the child's backpack. These hairs are later matched to a suspect's dog, a golden retriever. DNA evidence later shows a match between the hair and the suspect's dog.