# 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."

# Project Science

**Planning a Crime** - On a separate sheet of paper write & answer the following. This is a grade, turn the completed paper into the 2nd hour tray with everyone's name on the paper.

In your group, figure out your crime. The body can't be at the crime scene, however, one of you in your group is the victim and one of you is the criminal. It is up to the rest of the class to solve your group's mystery.

**Setting:**

**Murder Weapon:**

**Brief synopsis of the crime:**

**Criminal:**

**Why did he/she commit the crime:**

**Victim:**

List pieces of evidence that will be at the crime scene for investigators to find and use as clues to figure out "Who Dunnit!"

# FBI CRIME LAB

The History Channel

Use this word bank to fill in the blanks

Serology
bullets
DNA
training
Bertillon
human
Quantico
secure
polygraph
fingerprint
art
first
terrorism
fool
80
firearms
energetic
accurate
accredited
highest
largest
working
chromatic
grooves
unique
index
mitochon-
drial

FBI Crime Lab

1. The FBI crime lab is located in _____, Virginia.
2. According to the FBI Lab Director the most important quality of the lab is to ensure that the evidence is _____ and contamination free.
3. Forensic science is the _____ of finding whatever is left at a crime scene, developing it in such a way that it can be used to associate it to the person(s) at the scene...because you can't _____ science.
4. The nation's _____ crime lab was at Northwestern University. In 1802 the first FBI crime lab was opened.
5. In 1936 the FBI crime lab was among the first labs to test the _____.
6. The FBI created a unit of serology. Through chemical test it could test for _____ blood types.
7. In the mid 1970's the crime lab became a crime fighting tool. It began to realize that physical evidence is far more _____ than any eyewitness description.
8. The FBI was finally _____ in 1997 when a larger lab was built in Virginia.

Firearms & Tool Marks Unit

9. The firearms & tool marks unit examines _____, bullets, cartridges, and other items.
10. When matching a bullet to a gun, examiners examine _____ of the gun. The grooves enable the identification with great precision. Every gun will leave its own _____ microscopic mark.
11. The FBI has the largest _____ firearm forensic collection in the USA.

Explosive Unit

12. The basic component of a bomb is to have some type of _____ material which provides the explosive force.
13. The _____ case tackled by the FBI explosive unit was the crash of Pan-Am 103 Scotland in 1988.
14. The explosive unit is more important than ever because of _____.

# FBI CRIME LAB

The History Channel

Personal Identification Unit

15. In the 19th Century the _____ system was being used as an identification system until the William West case proved it to be flawed.

16. In 1924 the first fingerprint files were created. In 1953 fingerprints were discovered at most crimes scene and it started being used to support criminal matters. Today there are _____ processes to develop latent prints from cyanoacrylate fuming to alternate light sources.

DNA - Deoxyribonucleic Acid

17. DNA is the biological equivalent to a person's _____.

18. In the 1980's the FBI developed _____ technology to solve crimes.

19. There are two types of DNA testing used at the FBI; nucleus and _____.

20. The National DNA _____ system comprised of 170 crime labs sharing DNA information.

Chemistry & Trace Evidence Unit

21. The FBI relies on three forms of instrumentation: spectrophotometry, _____ instruments, and mass spectrometry.

22. The Hazardous Materials Response Unit is the _____ response unit used.

23. The bomb data center provides _____ to all public safety agencies.