Rifled is the bore of a gun barrel that has been machined to form a grooved spiral, much like a helix.

Ballistics is the scientific study of the motion of projectiles in flight.

When securing accelerant evidence during a fire investigation, it should be placed in a (n) paint can or similar container.

After a fire, the investigator notices that family pictures and valuables are not present in the debris. This lacking of personal effects suggests that it may be arson for monetary gain.

What are individual characteristics of shoeprints? Patterns, nicks, occlusions

What is a color test for the presence of nitrite in gunpowder residue? Greiss test

The ejector particles, combustion residues of the powder, and any unburned powder particles are collectively known as gunshot residue.

What is shown on a head stamp? Manufacturer, caliber, code

Striae or striations are parallel sets of scratches on a bullet caused by unique marking in the bore of a rifled weapon.

Identify the ammunition components.

What type of evidence cannot be found on the casing of the round? Lands or grooves

A pair of gardening shears is found at a crime scene. How are they packaged? Box

Tire impressions were located at a crime scene. The weather is clear and warm. What should be done first? Photograph the impressions

What is the term associated with intentionally starting a fire? Arson

What are possible motives for deliberately starting a fire? Monetary gains, crime concealment, mentally disturbed, revenge or spite, malicious vandalism
Firearms, Toolmarks, and Impressions Study Guide Key

Name _____________________________

Investigators find an expending round (bullet) at a crime scene. In order to compare the unknown sample to a known sample, a round may be fired into ____ballistic gel__, ____water tank__, or ____gauze____ for comparison.

When comparing the above mentioned bullet, investigators can use a comparison microscope to compare the ____lands and grooves (striations)____ of the two rounds.

A body is found in the debris of a house fire. During the autopsy, the pathologist determined that the victim did not have smoke in their lungs. This proves that ____victim was deceased prior to the fire____.

In 2004, there were ____12000____ homicides in the United States.

Name the four types of firearms. ___handguns__, ___rifles__, ___shotguns__, and ___air or BB guns__

Bullets are made of ___lead__, sometimes jacketed with ___brass__, ___copper__, or ___steel___.

Lands and grooves are ____class____ characteristics.

Striations can serve as ____individual____ evidence, matching bullets or bullet to a firearm.

What are three individual characteristics that can be found on a casing? Extractor marks, firing pin marks, breech marks

What are the six individual characteristics associated with firearms?

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**Striae**

**Firing pin marks**

**Breech marks**

**Extractor marks**

**Ejector marks**

**Chamber marks**

What are the seven class characteristics associated with firearms?

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**Bullet type**

**Bullet caliber**

**Bullet weight**

**Lands and grooves**

**Rifling**
Cartridge case

Head stamp

Photography and casting are important to match tool with mark.

Tire class characteristics involve design, size, type, and model.

What is TreadMate? a database containing data on more than 5,000 vehicle tires and tread patterns.

Bite marks were the prime evidence in the conviction of serial killer Ted Bundy.

Grinding is usually used to obliterate identification numbers.

To restore ID numbers on metal, an acid etching solution is employed.

What constitutes GSR? Primer components, burned and unburned powder, and nitrites