

Read the following passage about how forensic science is used to solve crimes. Then answer the questions based on the text.

Forensic Science

by Andrea Campbell

1. Today, more than a century after Sherlock Holmes first astonished and delighted readers with his brilliance, most crimes are still solved the way they were in the Victorian era: through confessions or eyewitness accounts. Increasingly, however, police and prosecutors rely on evidence of the type Holmes often used to get at the truth: scientific, or forensic, evidence. Today that evidence typically comes from sources such as fingerprints, body fluids, and bullets.
2. In contrast to the romantic image of one Holmes-like supersleuth single-handedly uncovering the facts of a case, truth seeking in law enforcement and criminal justice is actually a collaborative effort, involving the police, a medical examiner or coroner, investigators, and lab technicians. Each applies his or her own expertise to the problem. But modern criminal investigations still begin in a manner Sherlock Holmes would find familiar—with careful examination of the crime scene. After police have secured the site, criminal investigators collect physical evidence. This evidence will be sent to crime labs, where expert technicians and forensic scientists will analyze it. Their findings, in turn, will affect the course of the police investigation and, if a suspect is charged, will be presented to the jury at trial.
3. In our title, we have referred rather informally to forensic science. However, distinction should be made between the terms *forensic science* and *criminalistics*, which are often used interchangeably. Forensic science is a science applied to answering legal questions. It draws together principles and knowledge from one field, or a combination of fields—such as medicine, mathematics, physics, chemistry, biology, and anthropology—and applies them to legal proceedings. For example, *serology* is the study of blood and other body fluids; *forensic serology* is the study of blood and body-fluid evidence to help reconstruct a crime or an accident. Criminalistics, on the other hand, is a branch of forensic science that deals specifically with the scientific collection and examination of physical evidence as it relates to a crime. Any references in this text to forensic science are actually references to the entire field of discovery.
4. But what exactly is forensic evidence? How is it used, and what does it mean in court?
5. Like any competitive game, a criminal trial is governed by rules. The rules of evidence dictate how evidence can be presented in the courtroom. For example, the prosecution, or the attorney representing the state (and the people in that state), may present various legal proofs in order to convince the judge or jury of the defendant's guilt. These can be witnesses, records, documents, objects, or other materials.

6. Four kinds of evidence may be admitted at trial:

1. *Testimony* , statements from competent, sworn witnesses.
2. *Direct evidence* , which refers to observations of eyewitnesses.
3. *Circumstantial evidence* , which is any information that tends to prove or disprove a point at issue.
4. *Real, or physical, evidence* , sometimes also called hard evidence, which refers to any tangible article or object of any kind, such as fingerprints, weapons, and bloodstains. (Real evidence may also include facsimiles such as photographs and reproductions.)

7. Seldom is guilt proved or blame assessed with a single piece of evidence. But forensic evidence, which falls into the fourth category above, often serves as the added weight that helps tip the scales of justice. It may be used to reconstruct the crime, identify participants, or confirm or discredit an alibi. It also frequently helps to eliminate suspects. It establishes the facts of the crime—for example, that the bullet that lodged in the victim’s heart and caused his death came from the defendant’s gun. It can provide a step-by-step analysis of the events leading up to, including, and following the incident. In short, forensic science can be the glue that holds all the facts of a case together.
8. Sometimes prosecutors have little except forensic evidence from which to construct a case; other times they use forensic evidence merely to corroborate the other types of evidence they’ve developed. Forensic evidence does not serve all cases. Typically it plays a far more important role in the investigation of violent crimes than in the investigation of property crimes or accidents. But one thing is certain. Forensic evidence is static. It stands immobile. Because unless the criminal takes something away from the crime scene, hard evidence does not leave. Unlike crime scene bystanders, hard evidence will not get confused or become frightened. And unlike criminals, it will not make up stories or lie.
9. Yet hard evidence is only as reliable as the people who collect, analyze, and interpret it. At trial, different experts sometimes draw different conclusions from the same evidence. And defense attorneys frequently attack the validity of forensic evidence by pointing to lapses in the way the evidence was collected or handled. Thus it is essential that law enforcement officers, forensic scientists, and prosecutors understand and meticulously follow proper evidence-handling procedures. Otherwise the guilty may go free, or the innocent may be wrongly convicted.

1 According to the excerpt, how are Sherlock Holmes' methods similar to the methods of forensic scientists today?

- (A) Holmes used hard evidence to solve crimes.
- (B) Holmes found instincts rather than testimony more helpful in solving crimes.
- (C) Holmes worked collaboratively with others in order to solve crimes.
- (D) Holmes relied heavily on science to help gather evidence to solve crimes.

2 In paragraph 7, the author includes these three sentences about forensic science:

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What is the purpose of these sentences in paragraph 7?

- (A) The sentences contrast the role of forensic evidence to the roles of the other kinds of evidence.
- (B) The sentences give specific examples to demonstrate how important forensic evidence can be.
- (C) The sentences warn that using a single piece of forensic evidence carries serious risk.
- (D) The sentences explain the argument that forensic evidence is not enough to prove a case.

3 What are three sentences in the text that reveal the author’s doubtfulness about the accuracy of the role of humans in the legal process?

4 Mr. Moore was accused of stealing Mrs. Park's laptop computer from her office. Four main pieces of evidence were used in the trial. Draw an arrow from each piece of evidence to match it to the kind of evidence described in paragraph 6 of the text.

Piece of Evidence
Police found a strand of hair the same color and length as Mr. Moore's in Mrs. Park's office.
A computer technician stated in court that the laptop found by the police had been regularly used by Mrs. Park.
Mr. Moore's office mate, Mr. Fowler, heard Mr. Moore tell Mrs. Park's that he would take her laptop because she owed him money.
A neighbor named Mrs. Blair stated that she opened Mrs. Park's office door and saw Mr. Moore lifting the laptop off the top of the desk.

Kind of Evidence
Testimony
Direct Evidence
Circumstantial Evidence
Real, or Physical, Evidence