



# Crime Evidence Through the Use of Forensic Science

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## 1. Introduction

The term/expression of “Forensic Science” entails what almost every human being knows what its functionality and function is. Forensic Science is not a matter of law that can be introduced in Parliament and that the President must sign it. But it is such a science which helps in the process of procuring justice in civil and criminal cases. It helps to find/trace crime, time of crime, place of crime, as well as to apprehend the criminal who has perpetrated a crime through such tests.

Forensic Science is such a scientific screening/testing which helps in the process of procuring justice in chemistry, medicine, surgery, physiology, and photography techniques. It is also used for signature verification in civil courts as well as screening/testing of samples of signature. Hence, the process of justice can be smoothed quite easily and successfully.

With the advent of Forensic Science and its varied branches, screening/testing methods have changed completely in such a manner that it has become an integral part of our judicial system. In the present age, whenever any question/issue arises regarding the parentage/fatherhood of a child, it can be resolved with the help of a DNA Test. Hence, (we can say that) the terms “Judiciary” and “Forensic Science” are entwined with each other.

## 2. What is Forensic Science?

Forensic Science bridges the gap between the Police and the Court in the Criminal Justice System. The police are entrusted with the task of investigating crime whereas it is the prerogative of the judge (sitting in a court) to decipher the truth. Forensic Science helps in distinguishing right from wrong by establishing truth scientifically and thereby adducing all the evidences with it. It holds a pivotal position in the present era of “crime” and “criminals”.

The word “Forensic” comes from the Latin word “Forensis”, which means “before the forum”. In short, in case if any event of crime is perpetrated, Forensic Science is used to help us in deciphering all the important aspects like the place and time of the incident, the age of the deceased, the way the death occurred, the circumstances what caused death, etc. by delving into its roots in order to detect and solve crime.

Whatever evidence is supposed to be investigated; it is done so in a Forensic Science Laboratory. Forensic science evidence is admissible by the courts. Forensic science is a subjective law whereas Forensic Science Laboratory is a procedural law.

## 3. Branches of Forensic Science

- 1. Toxicology:** It is the analysis and identification of poisons and drugs in the body. Forensic toxicology is the application of such analysis to cases in which death or injury may have been caused by the ingestion of drugs or poisons. By far the most common kinds of cases examined by foreign toxicologists involve drunk or drugged driving. In addition to drunk or drugged driving cases, foreign toxicologists handle cases in which there has been an overdose of illicit drug, which may contribute to or cause death.

2. **Forensic Anthropology:** This branch of Forensic Science deals with the identification of people who can no longer be identified by the usual methods. It basically involves the analysis of skeletal remains to ascertain the age, height, sex as well as other characteristics to establish an identity of the deceased. It is done mainly in the events of mass casualties, such as bombing, train and aeroplane crashes, road accident, etc.
3. **Forensic Odontology:** The hardest material produced by our body is enamel and hence, remains are often found with intact teeth. When it is not possible to identify such remains by any other method, the teeth are analyzed to establish identity. This helps in the identification of bodies in times of mass disasters. It also involves the analysis of bite marks.
4. **Forensic Biology:** This branch of Forensic Science deals with the analysis of biological evidence such as blood, semen, saliva, skin, hair, etc. It is then used to establish a connection between the victim and the perpetrator.
5. **Criminalistics:** It is the branch of Forensic Science which involves the analysis of evidence that is brought into existence by criminal activity. Such evidence might include drugs, weapons, fingerprints, blood, and trace evidence among others.
6. **Impression and Pattern Evidence:** Evidence for impression is the evidence produced when two objects meet sufficient force to produce an “impression”. This can include a two-dimensional impression, such as a bullet mark. Examination of pattern proof requires finding and evaluating additional details within a given perception. When used in conjunction, impression and pattern evidence can help in establishing vital links between a suspect/tool to a crime scene.
7. **Trace Evidence:** Example of trace evidence include substance such as fibers, diet, hair, bullet, residue, wood, and pollen. It derives its name from its ability to be easily transferable during crime between object, people, or climate. Trace evidence also plays a crucial role in linking the perpetrator to the victims’ shoes which may provide vital clues as to the location of the crime and thus help identify the perpetrator.
8. **Cyber Forensics:** It includes the study of electronics data and physical storage devices, such as pen drives, hard disks, etc. Its main purpose is to recognize, store, retrieve, evaluate, and present fact and opinion on digital content. This is mostly used to prosecute cyber crimes as well as civil events.

#### 4. Cases Solved with the help of Forensic Science

1. **Patan Gangrape Case:** When sexual exploitation/victimization for procuring marks had been going on for many years in Patan P.T.C. College, one day it so happened that one girl student became unconscious during prayer time. When she was sent for medical check-up/examination, it was confirmed that she had been raped. Hence, DNA test was performed immediately after collecting sperm, hair, clothes, and other things in the FSL (Forensic Science Laboratory Division). It proved that the lecturers/readers/professors of the Patan College were guilty. They were then sentenced to life imprisonment.
2. **Sunanda Death Case:** Sunanda Pushkar's dead body was found in Delhi five-star hotel on 17th January, 2014. In the first postmortem report, it was mentioned that her death was caused due to poisoning. But the viscera report was totally different. Dr. Gupta, Head of AIMS Delhi, confessed that he was pressurized to change the report.
3. **Hari Om @ Hero vs State of Uttar Pradesh:** The case involved six accused who were convicted for dacoity and murder of four individuals. Three of the convicted persons were acquitted by the High Court while sentences were imposed on others, i.e., life imprisonment for Sanjay @ Sanju and Saurabh @ Sanju and death sentence for Hari Om were confirmed. The conviction for Sanjay and Saurabh was primarily based on finger print examination, which matched the latent prints found on the items in the deceased’s house with exemplar prints of the appellants.

#### 5. The Importance of Forensic Science in Crimes

Even in today's modern era, when technology is developing (for the betterment of mankind), there are incidents wherein people use it to perpetrate crime. Yet, this technology itself proves helpful in nabbing any culprit who perpetrates crime. It means that whenever any criminal perpetrates crime, both the

court and the police utilize Forensic Science with a view to reach to the roots of crime by way of criminal investigation. All objects, which are found at the crime spot, are sent for investigation to the Forensic Science Laboratory which ultimately lead to nab the culprit. Forensic Science plays a pivotal role to nab culprits in the (nefarious) world of crime.

A crime scene investigator takes substance from the body for testing with a swab at the spot of crime in case of culpable homicide, rape, grievous hurt, suicide, self-immolation which helps the police officer to investigate case when, for example, he takes possession of blood stains, or if needed, even clothes, weapons and other things swabbed from both the culprit and the deceased; in case of rape, clothes of both the victim and the culprit. In case if blood, sperm, flammable liquid, or drug stain on such seized items is found, all information about its substances and what immediate consequences can it lead to is ascertained from the Forensic Science Laboratory by its experts. Thus, it helps by leading the police officer to the criminal.

Forensic Science Laboratory conducts procedures of scientific analysis in its different departments. It is on basis of this scientific analysis that experts provide their findings. In case, if these experts possess any education, practice, qualification, and experience with respect to analysis, their evidence will be recognized in the judicial proceeding. Thus, findings of the Forensic Science Laboratory prove to be useful.

## 6. Conclusion

Since Forensic Science is a scientific method, it proves to be a blessing for the Criminal Justice System. Its procedures are so highly technologically advanced that it can identify the culprit. Each human being possesses a distinct manner (or tendency) to perpetrate a crime. Similarly, Forensic Science possesses varied procedures to produce evidence of crime. Screening/Testing carried out in a Forensic Science Laboratory is “unfailingly accurate” and “clearly indisputable”. Hence, the adjudication process in a court-of-law becomes faster.

In order to make progress in (the field of) Forensic Science, we need to get rid of our current flaws. For example, we need to create an able network for varied procedures of the Forensic Science Laboratory. We need to undertake proper research in varied procedures with the help of science and technology. We also need to increase the number of Forensic Laboratories in India. A provision must be made throughout India in order to ensure that fingerprints and footprints of each citizen of India are procured.

## Reference

- 1.Forensic Science, <https://www.britannica.com/>
- 2.Forensic Science, <https://www.newscientist.com/>
- 3.<https://timesofindia.indiatimes.com/>
- 4.<https://www.hindustantimes.com/>
- 5.<https://www.project39a.com/>