

EVERY CONTACT LEAVES A TRACE



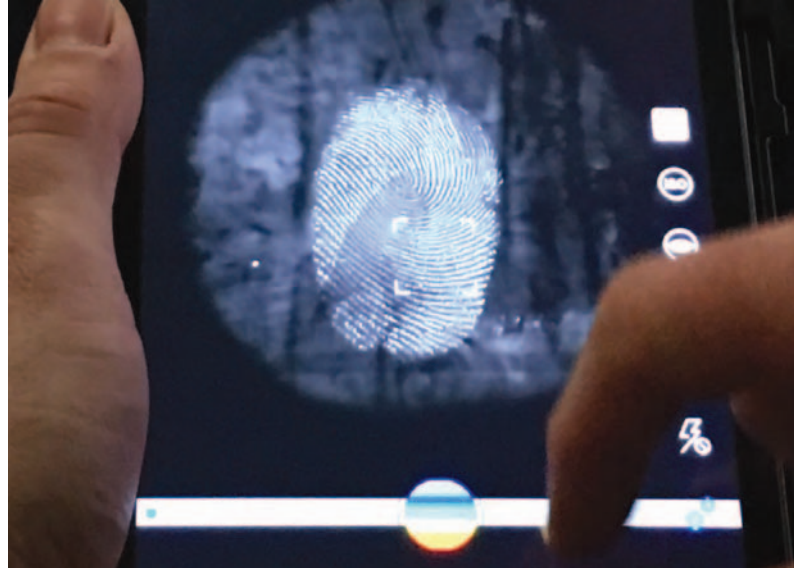
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In 1904, Sir Arthur Conan Doyle published the tale entitled *The Adventure of Black Peter*. In this story, the celebrated fictional detective Sherlock Holmes declares that “as long as the criminal remains upon two legs so long must there be some indentation, some abrasion, some trifling displacement which can be detected by the scientific researcher”. A few decades later, in 1934, Dr Edmond Locard, a renowned French scientist and criminologist, one of the pioneers of forensic investigations and responsible for one of the most important principles in forensic science, penned his famous Locard’s Principle of Exchange theory, and thus, the fictitious words uttered by Sherlock Holmes became fact. According to Locard’s theory, “any action of an individual, and obviously, the violent action constituting the crime, cannot occur without leaving a trace”. This has indeed become the basis of forensic investigation. Put simply, those involved in a crime always leave a trace behind them.

Since then, forensic science has changed how criminal investigations are handled. By examining and analysing the physical evidence and reconstructing the circumstances of the crime, forensic investigators are able to come up with scientific information that they can present in court.

To understand Locard’s theory, it is important to understand the importance of trace evidence to forensic investigation. When a crime is committed, the police and investigators are left with fragmented pieces of a puzzle. The forensic team helps to reconstruct the puzzle with the help of trace evidence, which refers to evidence left behind by the criminal at the crime scene. This can be anything from hair, fibres, shoeprints, pieces of clothing, blood, fingerprints, etc. The Malta Police was already adopting scientific methods during criminal investigations even before Locard’s 1934 theory. →





As a fact, the Malta Police Forensic Science Laboratory can trace its origins back to 1931. In that year, two police officers from the Criminal Investigation Department (CID) were given training in the taking and identification of fingerprints. In its early years, all forensic investigations were carried out under the auspices of the CID. Subsequently, in the early 1950s, a photographic section was also introduced as part of the CID. During the same decade, various members were given intensive forensic training in the United Kingdom and the forensic science laboratory was formally established. In the following years, the Police Forensic Laboratory continued to grow and expand.

A Scene of Crime section was introduced in 1984 as part of the Forensic Science Laboratory, with a complete overhaul taking place in 1995, when 15 Scene of Crime officers undertook intensive training delivered by University of Durham experts. This Scene of Crime has since then become a core unit within the Malta Police Forensic Science Laboratory. Ongoing training has become a major component within the Laboratory's annual plans, with the most recent prestigious one being held earlier this year. The five-week training course was provided by the Netherlands Forensic Institute experts in crime scene techniques, and subjects taught included DNA sampling, scene of crime photography, and bloodstain pattern analysis, amongst others.

A scene of crime expert works alongside police investigators to help solve crimes. Their role is to locate, collect, preserve and catalogue evidence from a crime scene, placing evidence into protective packaging and sending it for forensic analysis. These so-called Crime Scene Investigators (CSIs) are constantly putting Locard's principle of exchange into practice by collecting the evidence that the criminal leaves behind. The scene and each piece of evidence are carefully

photographed, and then, properly collected and conditioned to avoid contamination, to be subsequently analysed in the laboratory. This expert additionally writes a thorough report of the scene and describes the evidence found. Once in the forensic laboratory, all the pieces of evidence are analysed and interpreted. One of the important principles taught to every police officer, both during recruitment training and in the course of continuous professional development exercises, is the significance of proper preservation of the scene of the crime. The most important aspect of evidence collection and preservation is protecting the crime scene. The first police officer on the scene is responsible for preventing other non-essential police personnel and civilians from entering the scene and often establishes a perimeter around the crime scene with police tape. If witnesses are present, they are identified and remain outside the perimeters of the crime scene while waiting for questioning by the investigation team. This is very important as one of the drawbacks of Locard's theory is the tampering with and destruction of evidence. In most cases, this is not done deliberately, but by the actions of the victim, witnesses and even the police themselves. These factors can lead to the removal or obliteration of the evidence, which can often mislead the investigators and cause problems with crime reconstruction. Misinterpretations or misleading evidence can lead to inaccurate crime reconstruction. To avoid this, the investigator needs to make sure that the crime scene investigation and reconstruction are carried out with care. This is one of the reasons why, when examining crime scenes, Crime Scene Investigators wear protective clothing and masks since it is of utmost importance that the evidence found is not contaminated.

In conclusion therefore, if you happen to be a crime victim or witness to a crime, please phone the police straight away and do not touch anything since every contact leaves a trace! ✨