

HOW SCIENCE FIGHTS CRIME

Fingerprints

Catching criminals has never been easy. When the police had to rely on what people had seen, the clues they had found or the confessions of criminals, it was very difficult indeed. However, scientists have gradually made the process easier. Two of the greatest discoveries for identifying criminals are the use of fingerprints and DNA samples.

Many early civilizations recognized that fingerprints—the pattern of fine ridges on your fingertips—are different from person to person. For this reason, Chinese potters used to sign their work with their fingerprints. It wasn't until 1858, however, that William Herschel correctly claimed that a set of fingerprints was unique to an individual. Fingerprints are different even for identical twins!

During the second half of the 19th century, scientists developed a method of classifying the differences among fingerprints. From then on, they could be used as evidence in criminal investigations. Fingerprints are classified into three main types—Arch, Loop and Whorl—or may be a combination of these.

In 1901 the Fingerprint Bureau was opened in London—the first of its kind in the world. The next year, a house burglar named Harry Jackson became the first person ever to be convicted by fingerprint evidence.

If fingerprints are left at the crime scene on blood or paint, they are easy to identify. But most prints are made by the oils and sweat on the skin. These are recorded by dusting them with a fine powder and transferring the dusty prints onto transparent tape, which is then photographed.

It used to take a lot of time and patience to find a match between the fingerprints taken at the scene of the crime and those of a known criminal. These days, the police are using computerized identification systems. The FBI's system holds the fingerprint records of about 70 million people. The system can perform 3,000 searches per second!



Arch



Loop



Whorl

1. The Chinese used fingerprints in criminal investigations.
2. Identical twins don't have the same fingerprints.
3. Harry Jackson was happy about the introduction of fingerprint evidence.
4. There are five main types of fingerprints.
5. Computers have speeded up the identification of fingerprints.

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