


# FORMS OF IDENTIFICATION

No matter how similar two people may look, there are ways to tell them apart. Find out how everything from fingerprints to a strand of hair can be used to identify a person.

## You Are Unique



The typical person has two eyes, two ears, a nose, a mouth, two lungs, a heart . . . you get the idea. Most people are quite similar to one another. Despite those similarities, however, everyone—even identical twins—is unique. For example, fingerprints are completely unique to you. So is your DNA (though it is very difficult to see the differences in DNA between identical twins). **DNA**, short for deoxyribonucleic acid, is a complex molecule found in each cell of your body. Sections of DNA, called genes, guide your development and pass on characteristics from one generation to the next. (For more on genes, see page 82). If you've left behind a flake of skin or a strand of hair with the follicle attached, scientists could extract and analyze your DNA. They can prove that the skin or hair follicle belonged to you and you alone. Experts called forensic scientists use techniques like these to help solve crimes.



**A fingerprint on paper can survive for more than 40 years!**



**A forensic scientist searches for evidence by dusting for fingerprints.**

### CRIME DETECTIVES

A forensic scientist might work for the FBI, a hospital, or even a university. Police call in these experts to study crime scenes for DNA or fingerprints and then ask them to explain the evidence to juries, lawyers, and judges. By looking at clear prints, experts can identify anywhere from 35 to 50 unique characteristics, called attributes. The tiniest of clues could nab a criminal!



# What Are Fingerprints?

Fingerprints are the tiny ridges on the tips of your fingers. They give your fingertips texture. These ridges also contain sweat glands that moisten your fingertips. Together, these features increase the friction between your fingertips and various objects—giving you a better grip on things.

## Types of Fingerprints

When you touch something, small amounts of oil from your skin rub off on the object and leave a fingerprint.

There are three types of fingerprints: arch, loop, and whorl. Look closely at the pattern of ridges on your fingertips: Which types of fingerprints do you have?



### ARCH

Lines start on one side of the print, rise in the middle, and then exit on the other side.



### LOOP

Center lines enter and exit on the same side of the print.



### WHORL

Circles in the middle don't exit on either side of the print.

## OTHER WAYS TO ID A PERSON

You're different from other people in many ways. For instance, the colored part of your eye, called the iris, has a pattern unique to you. In fact, your left iris is distinct from your right iris! A computerized eye scan can identify a person based on the amount and color of pigment in the iris as well as the iris's pattern of pitted depressions and raised ridges. There are 226 measurable characteristics of your iris—much more than the 35 to 50 characteristics of your fingerprints.



How else are you different from everyone else on Earth? The ridges and lines of your palm are unique to you too. In fact, palm prints are more commonly



used to identify a suspect of a crime than fingerprints are. At least 30% of the prints lifted at crime scenes are of palms, not fingerprints!

The use of characteristics of the human body to identify individuals is called biometrics.