



Fingerprinting

Scouts BSA · STEM

Name

Started

Completed

Fingerprinting is about the science of how your fingerprints make you unique and how they are used to identify people. You'll learn how experts read prints and take a clear set of your own. It's a short badge with a lot of cool science.

Requirements

Every official requirement, in plain language. Check the official wording when you sign off (scouting.org/merit-badges/fingerprinting/). Tips and examples are ideas, not extra requirements.

- ☐ **1** Give a brief history of fingerprinting and explain how civil identification differs from criminal identification

Tip: Look up how fingerprinting started and how it's used for things like background checks versus solving crimes.

Example: Explain that fingerprints have been used for identification for well over a century, first by police and later for many other purposes. Then compare: civil ID checks prints for jobs or licenses, while criminal ID matches prints from crime scenes or arrests.

2 Identification systems

Tips for this section: Think about where you've seen biometrics, like unlocking a phone with your fingerprint or face. Learn how a computer system matches prints.

Example for this section: Explain how an automated system turns a print into a map of ridge endings and splits, then compares it against stored records and gives a list of possible matches that a trained examiner checks. Then list other biometrics: face, iris, voice.

- ☐ **2a** Explain how the automated fingerprint identification systems (AFIS) police use differ from biometric fingerprint systems that control access to computers and places such as buildings and airports

- ☐ **2b** Talk about how society uses identification based on tokens, passwords, and biometrics

3 Fingerprint science

Tips for this section: Use a magnifying glass to study your own fingertips and notice the tiny ridges and patterns.

Example for this section: Explain the principles: friction ridges form before birth, stay the same your whole life (unless deeply scarred), and are unique to each finger. Point out ridge endings, bifurcations, and dots on your own enlarged print.

- ☐ **3a** Name the body surfaces that have friction (papillary) ridges

- ☐ **3b** Name the two basic principles behind fingerprint science and briefly explain each one

- ☐ **3c** Explain what is needed to positively identify someone by their fingerprints

4 Clear set of prints: Choose 1 of 2

Tips for this section: Use an ink pad or a pencil-rubbing method and practice rolling each finger smoothly. It takes a few tries to get clean prints.

Example for this section: Take a full card of ten prints with an ink pad: roll each finger from one edge of the nail to the other in one smooth motion. Your first few will smudge; redo them until every ridge is clear.

- ☐ **4a** Make both rolled and plain impressions on an 8-by-8-inch fingerprint ID card (your counselor or local police department can provide one)

- ☐ **4b** Use a pencil, plain paper, and clear adhesive tape to record your own fingerprints or someone else's

- ☐ **5** Show your counselor that you can recognize the three basic fingerprint pattern types and their subcategories, then identify the patterns on your own hand

Tip: Compare prints from family members and sort them into loops, whorls, and arches.

Example: Sort prints from willing family members into the three patterns: loops (ridges enter and leave from the same side), whorls (circles or spirals), and arches (ridges flow straight across with a hump). Loops are usually the most common.

- ☐ **6** Name three careers that use biometrics and/or fingerprinting. Research one: training, education, certification, experience, cost to get started, job outlook, starting pay, and advancement. Discuss it with your counselor and whether it interests you

Tip: Ask a police department or sheriff's office about fingerprint and identification jobs.