



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Danielle S. Chien	Project Number J1003
Project Title Genetics or Coincidence? The Secret of the Unique Fingerprint	
Abstract Objectives/Goals The purpose of my science project was to determine whether or not fingerprint patterns were a genetic inheritance and also to determine which types are the most common in human fingers. Methods/Materials I went to different households that included two parents and their biological children. Then I had each volunteer thoroughly ink their forefinger on a hard ceramic plate that I had rolled ink onto and after they tested their fingerprint out on scratch paper and their fingerprint looked clear, they carefully put their fingerprint onto a paper designated for their family's fingerprints. Then I carefully categorized each fingerprint in its pattern and decided whether the fingerprints of the children matched those of the parents and which fingerprint patterns were the most common. Results The results of my project were that the children of 88% of the families had fingerprints that resembled one or both of their parents. The whorl, the right loop, and the left loop were the most common in all the fingerprints that were collected for this project. Conclusions/Discussion My conclusion is that children do inherit fingerprint characteristics from their parents and that whorls, right loops and left loops are the most common fingerprint patterns.	
Summary Statement My project is about the heredity of fingerprint patterns and the fingerprint patterns that are the most common.	
Help Received Mother helped with display and transportation; Police department helped with research and materials; Volunteers helped by willingly giving fingerprints.	