



# Fingerprinting

**STEM Sims**

## Lesson 1: Fingerprinting Fun

Fingerprints are the impressions given from the small ridges on your fingers. The small ridges are used for providing friction, which helps you to grab objects. The natural oil from your skin leaves fingerprints behind as you touch things with your fingers. Fingerprints are unique for every single person and can be used to identify criminal suspects. Use your detective skills and find the culprit by matching fingerprints!

### Doing the Science

1. Start the Fingerprint Simulation by clicking on the “Sim” tab.
2. Record the ID number in Table 1 below.
3. Click on each of the fingerprints from the left and right hands to get a closer look at the fingerprint.
4. Identify which of the fingerprints are whorls and record the finger number (1-10) into the table under “Finger Numbers with Whorls”. Use the “Background” tab to refer to the finger numbers.
5. Using the “Finger Numbers with Whorls” columns, find the value of the fingerprints with whorls and record the numbers under “Finger Number Whorl Values”. Refer to the background to find the values.
6. Sum the whorl values of the odd finger numbers and record into the table.
7. Sum the whorl values of the even finger numbers and record into the table.
8. Calculate the primary group ratio by adding 1 to “Sum of Even Whorl Values” and divide that by 1 added to the “Sum of Odd Whorl Values”. Record the ratio into the table.
9. An example is provided in the first row to help you.

**Table 1.**

	Finger Numbers with Whorls	Finger Number Whorl Values	Sum of Odd Whorl Values	Sum of Even Whorl Values	Primary Group Ratio
<b>Example</b>	3 6 8	8 4 2	8	6	7/9
<b>ID #</b> _____					

### Do You Understand?

1. Is the Henry Classification System an effective way of identifying fingerprints? Explain.