Fingerprint Basics

Use the websites listed on the Forensic Science page of the Kid Zone at http://sciencespot.net/ to complete this worksheet. The links are listed in the Fingerprint Basics section.

Site #1: NIST – Fingerprint Comparison

1. Use the information in the video to complete this section. You may have to watch it more than once to see or hear all the information you need!

   A. What is a "ten prints"? ____________________________

   B. What is another term for a print found at a crime scene? __________________________

   C. The FBI developed the _______________ _______________ Workstation to help overcome problems with fingerprint identification.

   D. What term is used to describe recognizable details on a fingerprint? __________________________

   E. What type of minutiae points are shown below?

   

   ![Site where the ridges form a "Y"](image)
   ![A ridge that splits into two](image)
   ![Site where a ridge ends; tail shows direction](image)
   ![Site where the ridges make a U-turn](image)

   F. After identifying minutiae on a latent fingerprint, a search is made of sets of _______ _________ that have been archived.

   G. Matching prints are then turned over to the latent fingerprint ____________________________

Site #2: Fingerprint Pattern Analysis

Complete the classification exercise. Record the number of prints you have for each type of pattern.

   # of Whorls = _________  # of Loops = _________  # of Arches = _________

Site #3: TruTV Fingerprint Game

Choose the “Fingerprints Game” link and follow the directions to match the prints. Try the game at least 5 times and record your efforts in the chart.

<table>
<thead>
<tr>
<th>Print</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Guesses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correct Print</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To identify the prints, use the corresponding letters below.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
</table>

T. Trimpe 2006  http://sciencespot.net/
Site #4: PBS Whodunit?

Click the link for “Whodunit?” Read the information presented and follow the directions to complete this activity.

A. What was the crime? __________________________________________________________

B. What time did it happen? _________ Where? _________________________________

C. How many people were involved? ________

D. How many fingerprints did you collect from the bank? ______

E. How many other fingerprints did you find that could not be used? ________

F. Who are your main suspects? Give their full names and nicknames!
   a. _________________________________
   b. _________________________________
   c. _________________________________

G. Why would you fingerprint the bank employees? Explain.
   __________________________________________

H. Follow the directions to match prints from the evidence files to the ones in the fingerprint files.

I. Which person was responsible for the crime? ________________________________

Done? Try any of the sites listed on the Forensic Science page of the Kid Zone.