Activity: Handwriting Analysis

<table>
<thead>
<tr>
<th>Ideal Group Size</th>
<th>Grade Level</th>
<th>Set Up/Clean Up Time</th>
<th>Activity Time</th>
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<tr>
<td>Small to mid-size (up to 30)</td>
<td>2-5</td>
<td>2 min / 1 min</td>
<td>10 minutes</td>
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Math/science questions addressed: What do detectives look for when they analyze handwriting?

Overview: Participants see how handwriting is used as a forensic tool as they identify a “suspect” who wrote a ransom note and attempt to replicate someone’s signature.

Materials: 4 sets handwriting samples, 4 “ransom notes” written by one of the suspects, paper, pencils.

Set up: Cut sheets of paper in half so that there are enough half-sheets for each person to have one. There are enough materials for up to four groups.

Activity 1: Who dunnit?

To do:
Pass out the writing samples to each group (up to 6 participants per group) and ask them to describe the handwriting seen on each sample. They should look for the following characteristics:
  a. Form – shape, size, slant, angles of letters
  b. Lines – thickness of writing, type of tool used
  c. Arrangement – spacing of words & letters
  d. Content – consistently misspelled words, grammar trends

To do: Pass out the “ransom note” to each group and have them pick a suspect.
Ask: What made you pick the suspect you did? What about their writing suggested that they were the ones that wrote the note?
Activity 2: You dunnit!

To do:
1. Pass out a half-sheet of paper and a pencil to each person. Have them sign (or write) their name along the short side of the paper.
2. Pass sheets around to other participants and have them try to copy the signature at the top of the paper.
3. Once 5 or 6 people have signed each paper, pass the sheets back to their original writers.

Ask: What was hard about copying someone’s handwriting? What looks different between the different forged signatures (e.g., size of letters, slant, writing utensil, loops etc.)?

Ask: In what situations would police be concerned about forged signatures (i.e. checks, documents, fraud, etc.)?

Background: Handwriting analysts are called upon to verify the authenticity of documents or contracts like wills or business agreements. However, they aren’t used quite so often these days because computers are used for most things. Tracking computer fraud is hard in different ways. In another activity in this theme we will talk about chromatography which can be used to identify the writing implement or ink that is used to help identify authenticity. One source of forgery that is common today is credit card fraud. Sometimes this involves someone forging a signature. While this may not be easy, it is certainly possible since it relies on the ability of a teller to identify a forged signature. Ways to help prevent forgeries or fraud are things like using PINs or passwords or requiring photo identification.