

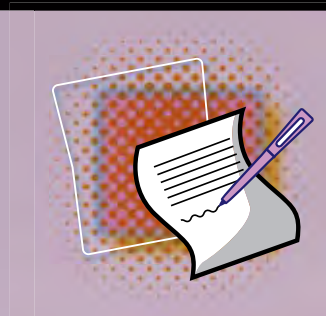


# JUNIORS

## UNLOCK THE MYSTERY...

### Handwriting Analysis

- One note card per girl
- Pens
- Scissors
- Glue stick
- Large piece of paper



When there's a suspect in a crime and the evidence includes a handwritten note, investigators may call upon a handwriting expert for analysis. Here are some of the handwriting traits the experts will look for:

**Letterform** - Curves; slants; the relationship between size of short and tall letters and the height and width of a single letter; the slope of writing; and the use of connecting lines between letters.

**Lineform** - How smooth and dark the lines are, which indicates how much pressure the writer applies while writing and the speed of the writing.

**Formatting** - The spacing between letters; the spacing between words; the placement of words on a line; and the margins a writer leaves empty on a page.

Along with these clues, research other handwriting traits online with the help of an adult and use them to complete this activity.

Ask each girl to write the word "dictionary" two times on the same note card - leave a couple of lines between the two words as they will be cut apart. The adult should take the completed cards, scissors, glue stick and large piece of paper into another room. She will need to make two columns on the large piece of paper. As the note cards are cut apart, the words should be glued to the large paper (one in each column but in different positions). The adult should make an answer key when gluing on the words. When all the samples are glued to the paper, present the two columns to the girls. Ask the girls to discuss the characteristics of the samples and decide which two samples go together. As they choose matches, they can draw a line between the matches. Once all of the matches have been made, compare the answers to the answer key and see how successful the groups' analysis skills are! How did working together as a team help the group make the matches faster and more accurately?



### Telling Footprints

One of the most influential philosophies behind modern forensic science is **Locard's Exchange Principle**. It states that "with contact between two items, there will be an exchange". This exchange can include fingerprints, footprints, hair, fibers from clothes, broken glass, tool marks, scratched paint and so on. An easy way to observe this principle in action is with footprints. Discuss a good method of capturing some sample footprints on paper. Once you've agreed on a method, collect a variety of samples to analyze. What can you tell from these samples? Was the person running or walking? Make a list of features in each footprint that might help identify the owner of the shoe or what they were doing when they left the print. **Locard's Exchange Principle** applies to animals as well. On your next walk outside, look for trace evidence of different kinds of animals.



## INVESTIGATE AND SOLVE IT TOGETHER

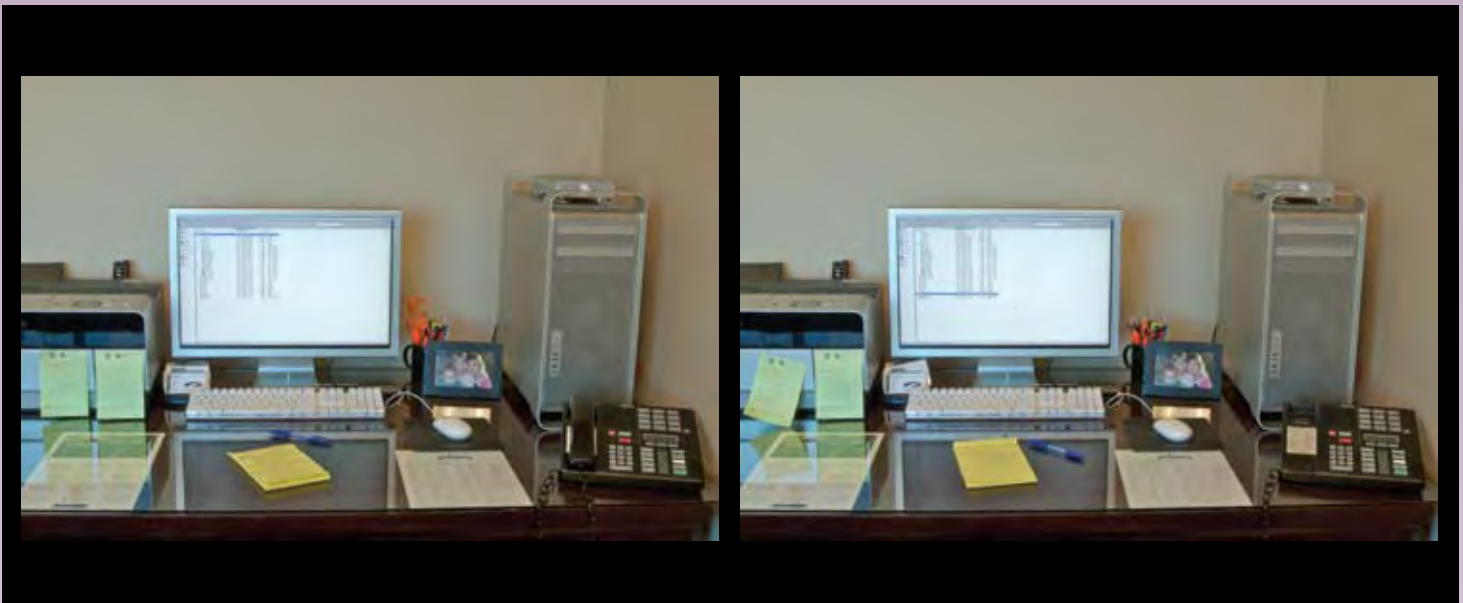


# JUNIORS

## UNLOCK THE MYSTERY...

### Subtle Differences

Have you ever glanced at two objects and said, "those are the same" only to look closer and see subtle differences that make each object unique? In much the same way, your product sale team is different from any other team in any group across the country. Your team has unique individuals and ideas that, when put together, will give your team results like no other troop. Discuss your teams goals for this product sale. How does your group hope to use the money you earn? How will you work together as a team to achieve these goals? That is the mystery that your team needs to unlock as you prepare for your product sale. Investigate and solve it together!



Can you spot the seven differences in these two similar photos? Were some easier to find than others? What do you think made some of the harder ones difficult? Does color or shape effect how quickly you see differences? As a group, discuss some possible situations where it might be important to quickly see differences while participating in product activities.

Answers: green paper, business card, note pad, pen, computer screen, scissors and phone.

## NUT DATA.....



### Almonds:

Almonds have been eaten plain and candied since they were introduced into Roman life in ancient times. Native to the Mediterranean countries, the almond was introduced to America from Spain in 1769. California is the almond capital of the world with over 110,000 acres of almond trees. Harvested in September each year, almonds are grown on trees resembling peach trees. Almonds have several gradings depending upon their cut (whole, sliced, slivered) and whether they are natural or blanched (skin removed).

# GSI