OBJECTIVES

- Develop participant abilities to observe and discuss test results.
- Help participants make inferences and draw conclusions based on evidence (and refrain from jumping to conclusions).
- Have participants begin to formulate a scientific model to explain chromatography.
- Help participants understand that models can be very useful but also have limitations that all models are inaccurate in one or more ways.

DIRECTIONS

1. Fill a loaf pan with water to about ½ inch depth.
2. Cut paper towel into strips about 1 inch in width x 4 inch length. The length of the strip when suspended from a pencil should hang with about ½ inch submerged in the water bath.
3. Test black pens.
   a. Using each black pen, place a single horizontal line across the width of a paper strip about 1 inch from the bottom of the strip. Use a separate paper strip for each pen.
   b. Use a pencil (not the black pen) to label each test strip for identification later (e.g. pen a, pen b, pen c).
   c. Attach each strip to a pencil with tape.
   d. Predict what you think will happen?
   e. Place the pencil across the loaf pan allowing the paper strip to hang down and touch the water. (Note: Be sure to have the ink mark about ½ inch above the water.)
   f. Observe. What do you see happening?
   g. Remove the pencil with paper strip(s) when the water has traveled about ¾ of the way up the strip.
   h. Compare paper strips. Do you see different patterns?

NOTE

Excerpted from pages 8-12 from Crime Lab Chemistry: Solving Mysteries with Chromatography, GEMS Teacher's Guide for grades 4-8 for training purposes only, please reference the Curriculum Guide for additional information.

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