



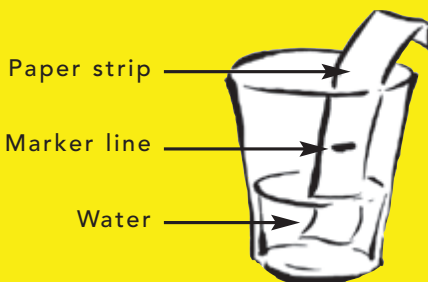
# COOL COLORS

## MATERIALS:

- **BLACK, GREEN, ORANGE AND/OR BROWN MARKERS (NON-PERMANENT, WASHABLE INK ONLY)**
- **COFFEE FILTER**
- **PLASTIC CUP CONTAINING 1/2-INCH WARM WATER**

## PROCEDURE:

1. Cut your coffee filter into a strip approximately 4 inches long and 1 inch wide (one for each marker).
2. Draw a line 1 inch from the bottom of your filter strip with a green marker, then drape the strip over the edge of the water glass. (Make sure the bottom of the strip is touching the water, and the marker line is above the water level.) As the water soaks up along the filter, what happens? Look at the color. Is green ink really green? Repeat the experiment with the orange and brown markers. What colors actually make up orange and brown?
3. Do the same with the black marker. If you have several different black markers, try each one. Is the black ink from one marker exactly like the black ink from another? (Remember: permanent ink does not dissolve in water. Only washable markers will work.)








## WHAT THIS MEANS:

The water dissolves the ink and carries it along the paper, causing the different chemicals (colored inks) that make up the ink to be left at different places on the paper. So you see, black isn't really black, but rather a combination of colors. This is also true of green, orange, brown and many other colors. This "color writing" is called chromatography and is a way of separating the colored chemicals that make up each ink.

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