



Kitchen Science

Chromatography

Chromatography is the science of separating mixtures. In this simple experiment, reveal the hidden colors that make up your favorite markers.

What you need:

- Water-based markers, especially black
- Thick coffee filters
- Small cup/bowl of water
- Eye dropper
- Shallow tray, placemat, or similar

What you do:

1. Place the coffee filter(s) on a shallow tray, or similar, to contain any water/marker.
2. Use markers to make small patterns: circles of dots, lines, etc. not too close together and not too many colors at once.
3. Fill the eyedropper with water. Slowly drop a little water in the middle of the design (it helps to leave the very center of your design clear for this purpose) until water/marker starts to 'creep' through the filter. What do you notice as the water spreads through your filter?
4. Observe the colors—what colors do you see? Which color travels farthest? What patterns do you get with different arrangements of dots and lines.

Things to try:

- Experiment with a solid medium other than coffee filters. Explore materials such as: white fabric (assorted types – felt, cotton, knit), paper towel, white construction or computer paper, cardstock.
- Compare different types of markers. Do permanent markers, highlighters, or different brands behave the same way?

