

# Paper Chromatography

Ages 5-10

*Prepared by University of Rochester iGEM*



## Background

Have you ever wondered how your markers get their color? What makes a marker blue? What makes a marker brown? In today's experiment, we will discover the answer using both science and art!

## Materials

1. One coffee filter
2. Coloring marker (brown or yellow works best)
3. One plastic cup
4. Pipe cleaners

## Experiment

1. Add a small amount of water to your plastic cup
2. Flatten one coffee filter
3. Take a marker of your choice and color a circle at the center of the coffee filter
4. Fold coffee filter into a cone shape
5. Pause and predict what will happen if we place the coffee filter into the cup of water
6. Place the coffee filter into your plastic cup so that only the tip of the cone touches the water
7. Watch as the water travels through the coffee filter. What do you see? What observations can you make?
8. After the water reaches the top of the coffee filter, remove the coffee filter from the plastic cup
9. Flatten out the coffee filter and let it dry
10. You now have a beautiful and colorful piece of art! You can even create a flower or butterfly. (What else could they create that is less "girly?")

## How does this experiment work?

As you can see, each marker is made up of multiple colors of ink! As the water travelled up the paper, the water separated the different colors. Scientists call this process **paper chromatography**. Scientists use paper chromatography to separate mixtures, just like how you separated the mixture of colors in your marker!

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Should this be live or recorded?

I am thinking that waiting for the water to travel up the coffee filter might be awkward live but other than that I think this would be good live. Any thoughts?

Amazon links to materials

1. [Coffee filters](#)
2. [Plastic cups](#)
3. [Pipe cleaners](#)
4. Markers
  - a. Do we need to buy or will camp have these?