



STEM Challenge

CHROMATOGRAPHY BUTTERFLY

What you need: Non-permanent markers, white coffee basket filters, pencil, cups of water, pipe cleaner (or clothespin), string, scissors

Method:

1. Draw a thick circle around the center of the coffee filter. (Put newspaper or some kind of material underneath to protect the table.)
2. Use a pencil to write the color of the marker being used in the center of the circle.
3. Fold the coffee filter in half and then in half again in the same direction, resulting in a cone shape.
4. Get a short glass of water. Pull apart the cone shaped coffee filter so it balances on the glass with the tip of the cone just touching the water. (Be sure to NOT let the marker circle go in the water, just the uncolored tip of the color filter cone.)
5. Let it sit and watch what happens as the water begins to flow up the paper.
6. After the water has reached the outer edge of the coffee filter, unfold and place it on newspaper to dry. Repeat with different color markers
7. Cut pipe cleaner in half. Pinch the top and bottom edge of the coffee filter together and wrap the pipe cleaner around the center. Shape the ends of the pipe cleaner to form antennae.
8. Tie string in the center and hang!

Questions: What happened to the marker as it got wet? How many colors do you see? What colors do you see? How are the colors different for different markers?