

Please use the following resources to learn about Chromatography!

Watch this Video: <https://youtu.be/08YMBGS1pYU>

Answer these questions:

- The word Chromatography comes from which two Greek words?
- In the video, what colors rose from the black marker line?
- Why do the different colors spread apart on the paper strip?

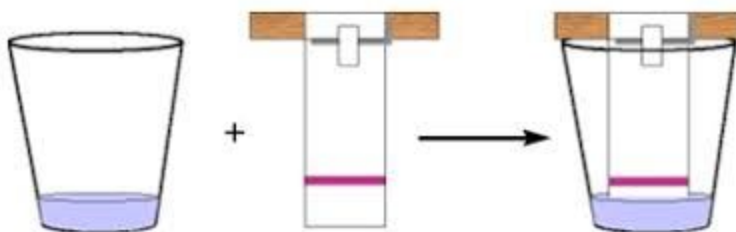
Activities: Follow these directions to practice paper chromatography!

You will need:

<ul style="list-style-type: none"> • Two black washable markers from two brands • 1 coffee filter 	<ul style="list-style-type: none"> • clear cup • water • scissors 	<ul style="list-style-type: none"> • tape • pencil
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1. Cut the coffee filter into ½" wide strips.
2. Draw a pencil line across the narrow end of the strip, about ½ inch from the edge.
3. Draw a small black dot on the pencil line with one brand of marker. Repeat step 2-3 with the other strip of filter paper and a different brand of black marker.

4. Tape the paper strip (unmarked end) to the pencil. Set the pencil across the top of a clear cup so that the marker dot is within the cup. Adjust the paper strip until it hangs down without touching the sides or bottom of the cup.



5. Remove the paper strip from the cup before carefully pouring water into the cup until it just touches the bottom of the paper strip. Start with a small amount and add more if needed. When you place the paper strip back in the cup, make sure the water level is below the marker spot, or else the ink will just run off into the water.



6. When the colors get near the top of the paper, remove the strip from the beaker and let it dry hanging in an empty cup. The series of colors you see is called a chromatogram.

7. Compare the two brands of black markers. Does each brand use the same dyes to make black markers? Repeat the experiment with different colors of washable markers or food coloring.

Make observations & use Claims, Evidence, and Reasoning!

1. **Claim:** Black markers are made from many colors.

- **Evidence:**

- **Reasoning:**

2. **Claim:** Some colors travel faster than other colors. _____ is the fastest.

- **Evidence:**

- **Reasoning:**