



BOW TIE & BUTTERFLY CHROMATOGRAPHY

MATERIALS:

- COFFEE FILTERS (ROUND)
- WASHABLE MARKERS
- SQUIRT BOTTLE WITH WATER
- PIPE CLEANERS
- PAPER TOWELS
- SAFETY GLASSES



PROCEDURE:

1. Put on the safety glasses.
2. Draw on coffee filter with markers.
 - Scribbles or dots work better than coloring the whole thing.
3. Carefully squirt the coffee filter 2-3 times.
 - Squirt enough to make the ink spread, but not too much to wash it out.
4. Watch as the colors separate into beautiful bands!
 - Try using different colors...brown works especially well.
 - As the filter dries, a more complete separation of colors takes place.
5. Wipe up any excess water and ink with a paper towel.
6. Shape into a bow tie or a butterfly with pipe cleaners.

WHAT THIS MEANS:

This special type of paper absorbs water easily. The different chemicals (colored inks) in the markers are soluble, or dissolve, in water. When water soaks into the paper, the colors dissolve.

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.

GLOSSARY:

- Ink:** A liquid or paste that contains pigments or dyes and is used to color a surface to produce an image, text or design.
- Pigments:** The natural coloring matter found in plant or animal tissue.
- Rainbow:** An arch of colors formed in the sky in certain circumstances, caused by the refraction and dispersion of the sun's light by rain or other water droplets in the atmosphere.

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