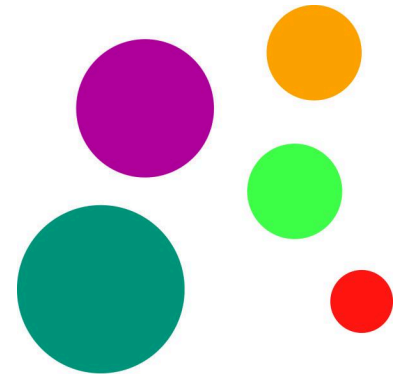


BOOMbox at Home

Coffee Filter Galaxies

Chromatography is an easy to observe chemical process where one state of matter (ink or paint) gets dissolved by another state of matter—in this case, a solution of water and rubbing alcohol. Coffee filter galaxies show chromatography by demonstrating how different colors in ink or markers can be separated based on their sizes.

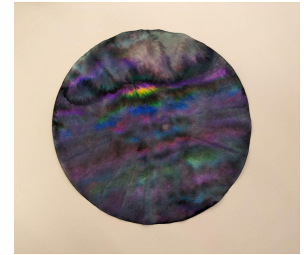


Supplies

- Coffee filters (any size)
- Water-based markers
- Spray bottle with 50/50 water-rubbing alcohol solution

Instructions

- Use water-based markers to draw an image or pattern on your coffee filters. This can be as complex or colorful as you'd like!
- You can look at [photos of real galaxies from NASA](#) for inspiration.
- When your design is complete, place your coffee filter on a flat surface like a counter, or on the ground.
- Use the spray bottle with the water-rubbing alcohol solution to wet the coffee filter.
- Try not to spray too much! You'll see the colors begin to spread out almost immediately.
- Allow about 5-10 minutes to dry.



Want to explore more?

- Experiment with different types of washable markers. Which colors react best?
- See this experiment in action with [PBS Science! KIDS video](#).

What will you learn today?