

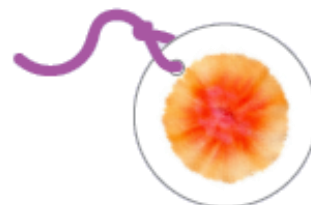
# Colorful Water Art

**Make colorful artwork with markers, water, and absorbent material!**

## Materials Needed:

Coffee filter (or paper towel), washable markers, scissors, water, eye dropper or spray bottle, tray or towel.

*Optional:* hole punch, yarn.



## Instructions:



**Step 1:** Cut a coffee filter or paper towel into sections. Choose two or three marker colors and draw a design.

*Hint:* This works best if you choose one primary color (red, yellow, blue) and one secondary color (purple, green, orange).



**Step 2:** Place your drawing on a tray or towel. Use an eye dropper or spray bottle to drop water on your design. What happens to the ink as it mixes with the water and moves through the paper? How does your design change?



**Step 3:** Draw more designs! Experiment with different colors, patterns, and amounts of water.

**Step 4:** Hang up your artwork to dry. Once it's dry, you can make a hole in one edge and tie yarn through the hole to make an ornament.

**Challenge:** Use a black marker to make a design. Add a few drops of water. Do you see any other colors? Black markers are made by mixing different colors together. Dropping water on the pigment separates those colors!

*Background Information:*

# Paper Chromatography

This activity uses a process called **paper chromatography**: the separation of a mixture in which the components of the mixture move at different rates. The water carries different color molecules at different speeds, depending on the size of the molecule and how attracted the molecule is to the paper. For example, pigments in the orange ink separates out to show a range of yellows and reds.

Chemists use the process of chromatography to separate and analyze the different parts of a mixture. Different chromatography methods use different materials. For example, scientists can make chromatograms of fall leaves to show how different leaf pigments break down in cooler weather. In many tree species, green chlorophyll breaks down in the fall and the leaves change to red, yellow, or orange.



*Image by Chris Glass, Wikimedia Commons.*

Chromatography is also used by law enforcement in crime scene investigations, by art experts to determine original paint pigments in restoration projects, and by artists to make colorful and beautiful artwork!



*Image by Ana Dziengel:  
[babbledabbledo.com/easy-art-and-science-idea-diffusion-art/](http://babbledabbledo.com/easy-art-and-science-idea-diffusion-art/)*