

**Teacher Lesson Plans Downloadable
Science Box/**

Title: Quick and Easy Tie-Dye

Primary Subject: Art

Secondary Subject: Science/Movement

Grade Level: 4-12

Provided by: Laura McNulty, Gifted and Talented teacher with the Pine Bluff School District

Materials needed:

White or light-colored cotton or cotton-blend T-shirt

Sharpie markers

Rubber bands

Rubbing alcohol

Eye dropper or syringe

Directions:

1. Twist small areas of the shirt and wrap with a rubber band a few times. I suggest you do the front of the shirt first and stretch it over a baking pan or other shallow pan – otherwise the color runs onto the back of the shirt.
2. Use Sharpie markers to add little dots and dabs of color on the little twisted areas. (A little color goes a LONG way!) Best colors are with related colors. See below.
3. In a well-ventilated area, add drops of alcohol onto the twisted marker area. The alcohol makes the dye in the marker run together. As soon as the colors have blended together – within a few minutes, take off the rubber bands. Leave the back and front of the shirts separated with the pan until they dry.
4. Put the shirt in the dryer for 15 minutes on hot to heat set the color and it's ready to wear!

Color Combinations that go well together:

- Reds, oranges, yellows and pinks
- Browns, greens and oranges
- Blues, greens and purples
- Blues, reds and purples

Resource: www.stevespanglerscience.com/experiment/00000032

Science Note:

This is a good demonstration of solubility and the movement of molecules. Every mother can tell you that Sharpie ink is permanent – those molecules do not dissolve in water – but they are soluble in the rubbing alcohol that carries the ink colors with it as it spreads across the shirt.

The center, located at 701 Main St. in Pine Bluff, is open 10 a.m. to 5 p.m. Monday through Friday, 1-4 p.m. Saturday and closed on Sunday. Support for the center is provided in part by the Arkansas Arts Council, an agency of the Department of Arkansas Heritage, and the National Endowment for the Arts. For more information, contact the center at (870) 536-3375 or visit the website at www.artssciencecenter.org.