

THEME: Colonial Life

TOPIC: Dying Cloth / Patriotic Tie Dye

PREPARATION / PROPS: Tables and chairs (or picnic tables) to comfortably fit the number of kids in your group, table coverings, tables to hold finished projects

LESSON: Tie-dying became popular back in the 1960's and hadn't yet been "discovered" in the 1700's. There were no Wal-Mart's back then to buy dye and rubber bands had not been created yet. Dyes were made from insects, plants, barks, and berries.



Mayans used cochineal to create a crimson dye. Cochineal was created by grinding up insects, and it was valuable enough to be included as a tribute to their Spanish conquerors in the 16th century. Another dye sourced from insects was created during this time by Pope Paul II. He ground up the Kermes insect to create "cardinal's purple" which was actually a scarlet dye. This dye became the new murex, or luxury dye, of that time. The use of plants as a source of dye was still important during this time. In 1507, France, Germany and the Netherlands turned the cultivation of plants to be used as dyes into an industry. More natural or plant-based dyes appeared in England in the 1600s, such as dye from the Logwood tree.

The bleaching of cloth with seaweed was introduced in 1716 Scotland. This was an important first step in the practice of bleaching cloth. Near the end of the century, chlorine would take its place.

Because indigo was expensive to import, England began growing the plant. However, the first blue dye sourced from chemicals would lessen the reliance on indigo as a source for blue dye. The first was Prussian Blue, which was created by mixing iron salt and prussite of potash in 1774 and aniline and bleaching powder to create bright blue in 1834. Even madder, used to create a blue dye, was replaced by a chemical called alizarin. Synthesized indigo completely replaced the use of natural indigo to create the vivid blue dye in the 1900s. William Henry Perkin made mauve-colored dye with aniline in 1856. In the history of dye, chemicals proved less expensive than the naturally sourced dyes and were more widely used.

DISCUSSION POINTS:

- What plants or bugs do you think might make good dyes? Would you have liked being a dye-maker back then?
- Do you think it was more or less time consuming to dye clothes in colonial times?
- Why do you think chemicals are less expensive than the natural sources of dye?

ACTIVITY: Patriotic Tie Dye

Materials: White t-shirts, two bottles liquid fabric dye (red and blue), rubber gloves, 3 pounds of thick rubber bands, paper towels, sharpie, 6 plastic tubs or buckets, squeeze bottles, newspapers

Method: Fill the buckets with water. Have the kids write their names on the tags of their shirts. Put the T-shirts in the buckets of water – they should be submerged for at least 20 minutes. During this time, talk about the history of dye.

Depending on the age of the kids, you can make the dye in advance or have them make it. Measure two tablespoons of liquid fabric dye and pour into the squeeze bottle. Add 1 tablespoon of table salt. Fill the bottle with water. Cover the hole with your finger and shake to mix.

Give each kid their shirt to wring out excess water. Show them how to roll, twist, and wrap their t-shirts with rubber bands and explain the process. The kids should put on their rubber gloves to protect their hands from the dye, and then take turns with the bottles, squeezing the color onto their shirts. When they are done, roll the wet t-shirt into newspaper (about three sheets per shirt) and place in a plastic grocery bag, labeled with a permanent marker. Dump the water out of the bucket and place their labeled bags in the bucket until the end of your meeting. Have the kids rinse off the gloves before they take them off, then remove and discard.

Send the following directions home to the parents: “When your child brings home their shirt, allow it to stay in the bag for 24 hours. When you open it the next day, it will be rolled in newspaper and may be messy. Take the shirt out of plastic bag and unroll the paper. Discard paper. Gently rinse the shirt under cold running water till it runs clear (approximately one minute). Hang to dry.” You may want to have the kids wear their shirts to your next meeting and take a group photo!

REFERENCES: [The History of Fabric Dyes | eHow.com](http://www.ehow.com/about_5422885_history-fabric-dyes.html#ixzz0srbisPRv)
[http://www.ehow.com/about_5422885_history-fabric-dyes.html#ixzz0srbisPRv,](http://www.ehow.com/about_5422885_history-fabric-dyes.html#ixzz0srbisPRv)