



ARGYLE
by
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Argyle simply wanted to find his favorite spot to graze. He had no idea that eating the special flowers he loved would cause his wool to change from plain white to all the colors in the rainbow. He certainly wasn't happy with all the commotion he caused. Once he was no longer free to return to the place where the flowers grew, his wool became ordinary again.

Wool dyeing is an ancient art and natural dyes are still being used today. Students of all ages enjoy cleaning and dyeing wool. The dyed wool can be spun and used for a variety of school projects. If a certain country is being studied, the wool could be dyed the colors of the nation's flag and used to make a *God's Eye*.

MATERIALS: Koolaid™ (not pre-sweetened) in a variety of flavors/colors (without the sugar, it's really just like powdered food coloring but the students love the fragrance which covers up the wet wool odor), vinegar to set the color, hot water, large and small bowls, clear plastic cups, crock-pot for large quantities, spoons for stirring, racks to dry yarn and string, white or off-white yarn, white or off-white strong string.

Activity #2: leaves from a maple, oak, and ginkgo tree if possible.

ACTIVITY: This activity was taken from Super Science Connections, pp 79 - 81. See teacher notes for sources of raw wool. Usually it comes washed, but the students can clean it and wash it easily. Add a teaspoon of vinegar to a cup of water. The water should be as hot as possible but safe for the children. Add the wool to the cup of hot water and sprinkle a small amount of Koolaid™ on the wet wool. Stir for a few minutes and then let the wool stand in the dye. Keep lifting it up to see the color. When the color looks the way the student wants it, the wool can be taken out, put on paper towels, and allowed to dry. When dry, the wool can be spun. Art teachers can help you with this ancient skill. If you want to dye wool for the whole class using a single color, use a crock-pot. I look for the packages of unsweetened KoolAid™ as summer approaches; sometimes they are 10 for a dollar. The sweetened variety will leave the wool sticky and susceptible to insects. Each child can pick a packet; sometimes he/she is surprised by the color of the dye that

results from that flavor. If you don't have access to wool, string or white or natural yarn can be used.

Raw wool is available from the American Wool Council, American Sheep Industry Association, 6911 South Yosemite Street, Englewood, CO, 80112-1414; (303)-771-3500 < <http://www.sheepusa.org/>> If you prefer, you might wish to be adventurous and use natural dyes from plants: light brown - onions skins; yellow - snakewood; pink - globemallow; lilac - blue lupine flower; purple - prickly pear cactus fruit.

SOURCES:

Wool dyeing activity with Kool-Aid™ is adapted from Super Science Connections. It is a publication of the Institute for Chemical Education at the University of Wisconsin-Madison. <http://ice.chem.wisc.edu/catalog.htm> Super Science Connections (SSC) was written by K-3 teachers, for K-3 teachers. It integrates children's literature, writing, mathematics, art projects, social studies, and health instruction with hands-on science — observing, devising experiments, hypothesizing, and drawing conclusions. It will model ways in which your classroom can become a place where students learn and enjoy science in context. SSC contains 34 activities centered on a science concept or process skill connected to the AAAS *Benchmarks for Science Literacy*. Order No. 94-009 1-800-991-5534. \$38 includes shipping and handling.

Clean wool ready for dyeing and or spinning is available from Educational Innovations, Inc. www.teachersource.com

Hands-on Rocky Mountains< <http://www.handson.com/rockymountains.html>> has information about weaving a small bag. This could be a good activity to do at Thanksgiving, even though the Indians who celebrated with the Pilgrims were not Navajo, or they could make this bag as a "Tooth Fairy Bag" in conjunction with nothing or with a study of teeth and their care.

STANDARDS:

BSL: 1.1, 1.3, 3.1, 3.2, 4.6, 8.1, 9.3, 11.1, 11.4, 12.2, 12.5

NCTM: 10a, 10b, 10d, 13a

SCS: A1, B1, B2, E1, E2, E5, H2

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