

RAFT IDEAS

Topics: Art Objects & Media, Properties of Materials, Holidays

Materials List

- ✓ Large, salad bowl lids (clear) (# 6, polystyrene)
- ✓ Permanent markers
- ✓ Potholder
- ✓ Foil
- ✓ Regular oven

This activity can be used to teach:

- Experiment w/ forms, structures & materials (National Visual Arts Standards: Creating, Grades K-8)
- Traditions & culture (National Curriculum for Social Studies: Theme 1, Culture)

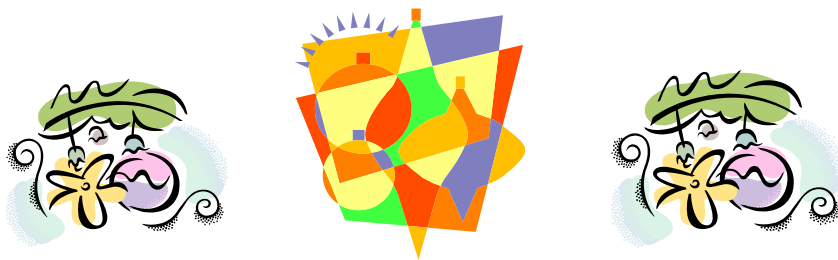
Next Generation Science Standards:

- Structure of matter (Grade 5, Physical Science 1-1)
- Properties of materials (Grade 2, Physical Science 1-1; Grade 5, Physical Science 1-3)
- Heating and cooling of materials (Grade 2, Physical Science 1-4)



Shrink Art Ornaments

Fun to Make, a Fun Decoration!

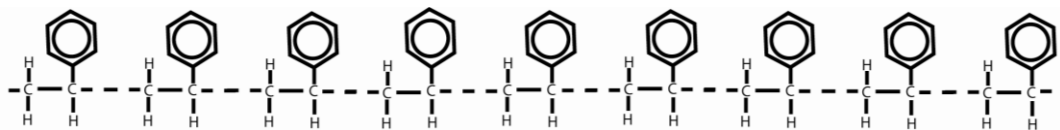


Create beautiful, fun decorative objects by drawing patterns on shrink plastic, and then watch them twist up and get smaller... smaller... smaller.

To Do and Notice

1. Put a design on the salad bowl lid by drawing patterns on the plastic using permanent markers in a variety of colors. Make sure that the item is #6 plastic!! For better results, cover most of the lid with color.
2. Create a hole to hang your ornament with looped yarn by punching a hole in the side of the lid. CAREFULLY, use point-tipped, household scissors to punch a hole. **Make the hole before heating!**
3. Shrink the ornament:
 - ✓ Place lid onto a piece of aluminum foil into a regular oven set at 120°C - 135°C (250°F - 275°F). **DO NOT USE A HIGHER TEMPERATURE!**
 - ✓ Depending on the oven, the design will shrink in 25-30 seconds. (It's fun to watch it shrink!)
4. The plastic will shrivel and eventually flatten out. For great effects, take the piece out when it is shriveled, before it flattens completely. Allow the piece to cool completely.
5. Tie a loop of yarn through the hole and hang the ornament at a desired location (holiday tree or other area of choice.)

The Science Behind the Activity



Shrink plastic (recycle #6) is made of polystyrene, a transparent, rigid, and brittle organic polymer. Polystyrene's properties make the plastic a choice material for disposable food trays and foam packing material. Polystyrene polymers are stretched during processing and solidify in this stressed state. Heating returns the molecules to their smaller, non-stressed state. During the shrinking process, the thickness of the plastic increases... mass is always conserved.

Evergreen trees (especially firs) have been part of Winter Holiday celebrations for centuries, and actually part of in-home decorations as early as the 16th century, where they were usually decorated with edible treats for children. While fancy, glass tree ornaments have been produced and sold since the mid 19th century, mass production began in 1920 and has grown along with the commercialism of the season.

Web Resources - (Visit www.raft.net/raft-idea?isid=380 for more resources!)