

# Shrinky Dink Earrings

## Materials

Rough-n-Ready Shrinky Dink sheets (cut one 10x8 sheet into 9 pieces – you can buy them in a pack of 10 from Michael's, so 1 pack works for 40 students)

Colored pencils, pens, etc.

## Safety Precautions

There are no chemical hazards from the materials used in this experiment.

Baking pans, plastic, etc., will get hot in the oven. Use pot holders or insulated gloves to handle any heated materials.

## Purpose

The purpose of this exercise is to explore properties of polymers. If measurements of length and width are made before and after heating, the percent shrinkage can be calculated. The students can mass the plastic before and after heating and decide if mass was conserved. Students can access whether a chemical change has occurred. Students can also observe how flexibility changes before and after heating.

## Directions

- 1) Cut squares, circles, or other desired shapes of the shrinking plastic.
- 2) Write or draw on them using permanent markers or colored pencils. Draw on the rough side of the plastic.
- 3) Punch a hole in the plastic using a paper punch.
- 4) Make any required measurements.
- 5) Hand your shrink dink to your teacher for them to place in the toaster oven set to 325°F.
- 6) Observe the plastic as it shrinks. Remove the plastic from the oven and flatten it if the plastic has curled.
- 7) Make final measurements and complete calculations and conclusions.
- 8) Glue onto earring posts, or earring hooks, or add to a key chain.

## Background

Shrinky dinks are bioriented polystyrene film has been stretched equally in all directions and allowed to cool. When it is heated, it softens and shrinks to its original pre-stressed size. Shrinky dinks will shrink to about 5/8ths their original size and become thicker. The mass shouldn't change. No chemical change has occurred.