

# **WORM WARMERS (DRAFT GUARDS)**

Linda Gregory  
Urbita Elementary School, San Bernardino, CA

**Overview:** Creation of draft guards to help reduce energy waste. (This lesson follows the Draft-O-Meter lesson in which drafts are detected.)

**Objective:** Students follow directions to make a draft guard.

**Subjects:** Language Arts, Science (Earth and Physical Science)

**Suggested Grade Level:** K-6



**California Standards addressed:**

- Language Arts - Listening and Speaking Grade 1 #1.1, 1.3, Listening and Speaking Grade 2 #1.1, 1.2, 1.4
- Science - Investigation & Experimentation Grade 1 #4b, Earth Science Grade 2 #3e, Physical Science Grade 3 #1c, 1d, Physical Science Grade 4 #1g

**Materials:**

- dry rice or lentils (each draft guard needs at least 2 pounds of rice)
- plastic wiggly eyes (2 per student)
- fabric glue
- pre-sewn fabric sacks
- one finished draft guard (1 per student)
- small cups for scooping (1 per student)

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## **BACKGROUND INFORMATION**

This is a follow up lesson to the Green Schools lesson on making draft detectors. After students have made the detectors and used them to find areas in the school or home where there are drafts they make draft guards to solve the problem.

### **PROCEDURE**

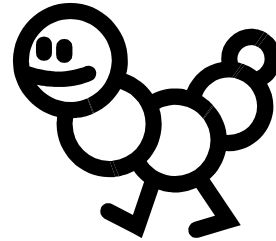
#### **I. Setting the stage**

- A. The fabric sacks for the guards should be pre-made as they require a

sewing machine. Each sack uses 6 inches by 38 inches of material. The sacks are sewn up the bottom and the sides, leaving the top open for filling.

- B. Ask students if they remember why they made draft guards in the previous activity. Remind them that these were made so they could find places in their homes or classrooms where drafts allow air to leak in or out of the room causing higher energy costs.

- C. Hold up the finished draft guard and tell them that this is our new classroom "Worm Warmer" and he can help us to cut down on drafts. Ask students how they think he can help and demonstrate laying the worm warmer on a windowsill or below a door where it can block a draft. Ask students to think of one place where they think a worm warmer would be helpful and share their answers.
- D. Explain that they are going to make a worm warmer too. Take the class outside to an area where spilled rice will not be a problem. This is very messy indoors.
- B. Explain that when they are done they use the fabric glue to add the eyes and to close the top of the worm warmer.
- C. Students will take about 15 to 20 minutes to fill the worm warmer, add eyes, and close the top, depending on their age. They should hold the end shut for one or two minutes to seal the glue.



## II. Activity

- A. Open up the bags of rice and show how to hold the open end of the sack wide to pour in a cup of rice.

## FOLLOW UP

- A. Ask students to take their worm warmers home to guard against drafts or to place them in their classroom to help cut energy costs.
- B. The worm warmers make excellent gifts as well.

## EXTENSIONS

Use the thermometer gun in the Green Schools kit to measure the temperature near a draft before and after the draft guard is in place.