

Collecting Solar Energy

Directions

Materials:

Shoe box
Glue or tape
Black construction paper
White paper
Plastic wrap
Ruler
Watch, digital or with sweep second hand
Thermometer

Other:

Sunlight or lamp with an exposed bulb to simulate the sun.

Have one group member read the following directions:

1. We will construct a box to collect solar energy and then measure energy that enters the box.
2. Glue or tape black construction paper on the inside of the box.
3. Cover the top of the box with two layers of plastic wrap and tape the wrap to the sides.
4. Poke a hole in the side of the box and put the thermometer into the hole. (The hole should be about the size of your pencil.)
5. Answer the following question on your worksheet: "What do you think will happen to the temperature inside the shoe box."
6. Place the box in bright sunlight or under the lamp and record the temperature every two minutes for eight minutes on your worksheet.
7. Take the box out of the sunlight and allow it to cool. Repeat the experiment using white paper.
8. After you have recorded the temperatures, answer the questions on your worksheet.

