

# Do-It-Yourself Solar Cooker

*4 Steps to Construct a Simple Solar Cooker & Use the Sun's Energy to Cook*

Any day the sun shines 3 to 4 hours between 10 a.m. and 3 p.m., you can cook a meal in a solar cooker made from simple supplies you may already have around the house. You can use this solar cooker for fun, as an experiment, in case of a gas or electricity outage, or to save energy. The principles involved include collecting the sun's rays and concentrating them on a dark surface, such as a dark, thin metal pan, and trapping the heat inside the pan. To collect the sun's rays, you need a bowl shaped container (a cardboard box in this case) lined with reflective material, such as mirrors, aluminum foil or mylar.

## 1 SUPPLIES

The supplies you will need to construct and cook with a solar cooker should cost approximately \$40, less if you already have some of the materials listed below in your home or garage.

- Two cardboard boxes, one for a solar cooker and one to cut extra pieces to affix to the solar cooker. A 12" x 12" x 12" box or slightly larger works best for the solar cooker.
- A Mylar emergency foil blanket.
- Glue or a spray adhesive.
- Roll of aluminum foil tape.
- Scissors and a utility knife.
- A glass cake dome.
- Two dark grey or black 9" round pans.
- 4 medium to large sized binder clips.



## 2 PREPARE THE BOX

1. Cut the top flaps off and slit the four corners down on the box that will be your solar cooker.



2. Cut four triangle-shaped sections from the extra cardboard box. These sections will be attached to each corner of the solar cooker later in the process (step 3 on page 2) to form a bowl shape.



The Public Utilities Commission of Nevada ("PUCN") oversees the administration of renewable energy and energy efficiency incentive programs in Nevada. The PUCN has provided this fact sheet as an example of saving money on gas and electric bills through conservation.

### 3 GLUE MYLAR TO BOX & TRIANGLES

1. Use scissors or a utility knife to cut pieces from the Mylar to glue to the box. Use glue or spray adhesive to attach the Mylar to the solar cooker. Leave a 1/2 inch space around the edges so the aluminum tape can better adhere to the box. Make sure the Mylar is glued flat to the box with no air bubbles.

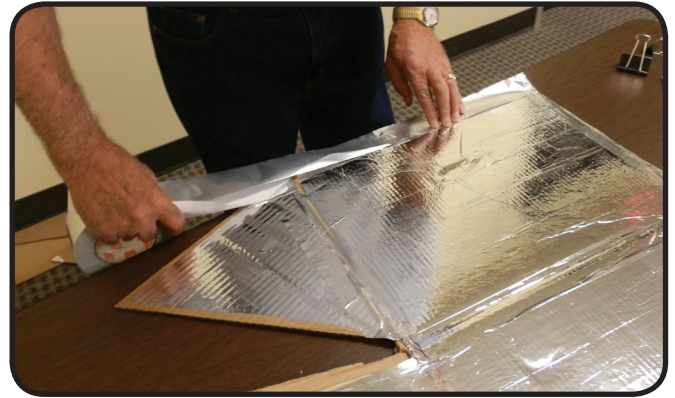


2. Attach Mylar to each of the triangle pieces you cut out earlier. Again, leave a 1/2 inch space around the edges for the tape.

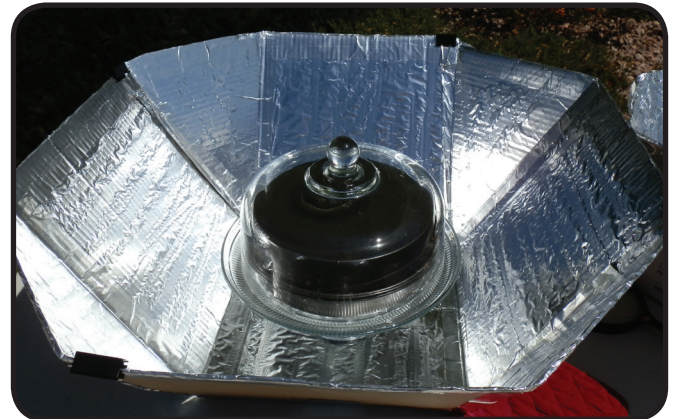


### 4 ASSEMBLE & START COOKING!

1. Use aluminum foil tape to attach the triangles to one side of each corner of the box. Then tape around all edges of the box.



2. Use binder clips to clamp the non-affixed side of each triangle to the opposite edge. Assembly is done!



3. Place your solar cooker outside, on the ground or a table, on a sunny day between 10 a.m. - 3 p.m. Stack the two 9" round pans on top each other, as shown in the picture above, inside the cake dome, with your food (pot roast or cookie dough, for example) placed in the bottom pan. The Mylar will collect the sun's rays and concentrate the heat inside the pans. The cake dome will prevent the heat from escaping and, because it's raised off the ground, allow cooking on all sides of the pans. Allow double the time required of a conventional gas or electric oven to cook food in the solar cooker. CAUTION: The pans will get very hot. Use oven mits when removing them from the cooker to avoid burning your hands.

#### **NORTHERN NEVADA**

1150 E. William St.  
Carson City, NV 89701-3109  
Phone: (775) 684-6101  
Fax: (775) 684-6110

Consumer Complaints: (775) 684-6100



#### **SOUTHERN NEVADA**

9075 W. Diablo Drive, Suite 250  
Las Vegas, NV 89148-7674  
Phone: (702) 486-7210  
Fax: (702) 486-7206

Consumer Complaints: (702) 486-2600



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