



- ABOUT  
SOLAR NOW
- For Teachers  
And School  
Administrators
- FOR STUDENTS
- INFORMATION  
FOR STUDENTS
- CONTACT  
US

## Make a Pizza Box Solar Oven

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This solar oven has been adapted from many designs. Please feel free to improvise! You may want to try making s'mores (graham crackers with melted marshmallow and chocolate) or English muffin pizzas.

The pizza box solar oven can reach temperatures of 275 degrees, hot enough to cook food and to kill germs in water. A general rule for cooking in a solar oven is to get the food in early and don't worry about overcooking. Solar cookers can be used for six months of the year in northern climates and year-round in tropical locations. Expect the cooking time to take about twice as long as conventional methods, and allow about one half hour to preheat.

**Information for Students**

Suggested Links for further Exploration

Glossary of Energy Terms

Solar Now  
Homepage

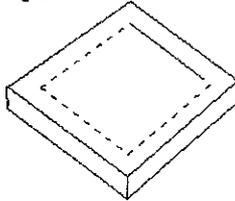
### What You'll Need

- Recycled pizza box
- Black construction paper
- Aluminum foil
- Clear plastic (heavy plastic laminate works best)
- Non-toxic glue, tape, scissors, ruler, magic marker
- Wooden dowel or straw

### How to Make Your Pizza Box Oven

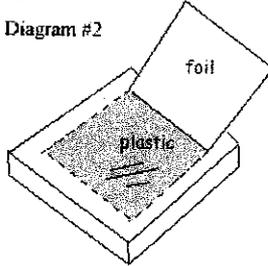
Draw a one inch border on all four sides of the top of the pizza box. Cut along three sides leaving the line along the back of the box uncut. (Diagram #1)

Diagram #1



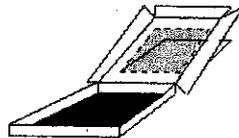
Form a flap by gently folding back along the uncut line to form a crease. (Diagram #2) Cut a piece of aluminum foil to fit on the inside of the flap. Smooth out any wrinkles and glue into place. Measure a piece of plastic to fit over the opening you created by forming the flap in your pizza box. The plastic should be cut larger than the opening so that it can be taped to the underside of the box top. Be sure the plastic becomes a tightly sealed window so that the air cannot escape from the oven interior.

Diagram #2



Cut another piece of aluminum foil to line the bottom of the pizza box and carefully glue into place. Cover the aluminum foil with a piece of black construction paper and tape into place. (Diagram #3)

Diagram #3



Close the pizza box top (window), and prop open the flap of the box with a wooden dowel, straw, or other device and face towards the sun. (Diagram #4) Adjust until the aluminum reflects the maximum sunlight through the window into the oven interior.

Your oven is ready! You can try heating s'mores, English muffin pizzas, or hot dogs, or even try baking cookies or biscuits. Test how hot your oven can get using a simple oven thermometer!

Diagram #4



▲1



up the solar oven