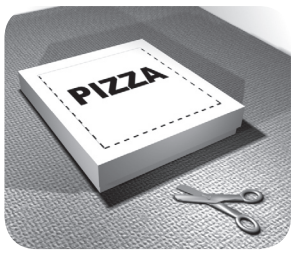
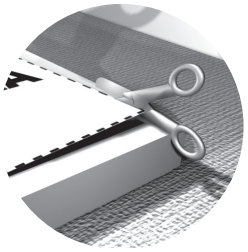
Project #5 Solar Pizza Box Cooker



Have you noticed how a car parked in the sun stays warm inside, even on cold days? That's because clear materials like glass and plastic trap the heat from the sun. We can use this principle to make solar powered ovens.

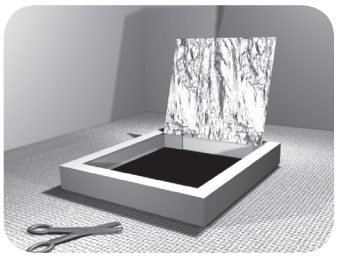
Materials

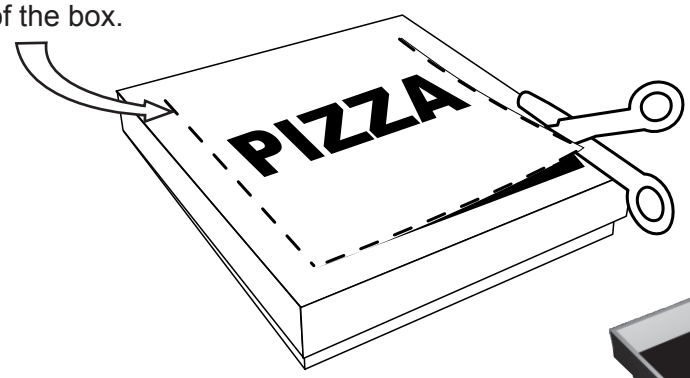
- 1 Medium Sized Pizza Box
- Black Construction Paper
- Aluminum Foil
- 1 Reynolds Oven Cooking Bag (made of nylon that can take up to 400 degrees F.) You can get 8 windows out of each bag.
- Masking Tape, Clear Tape (about 1" wide), Glue (optional)
- Scissors (or Craft Knife if an adult helps)
- Pie Tins to fit inside box
- String (yarn) or kabob stick to hold flap open
- Newspaper for insulation
- Oven Thermometer (optional)

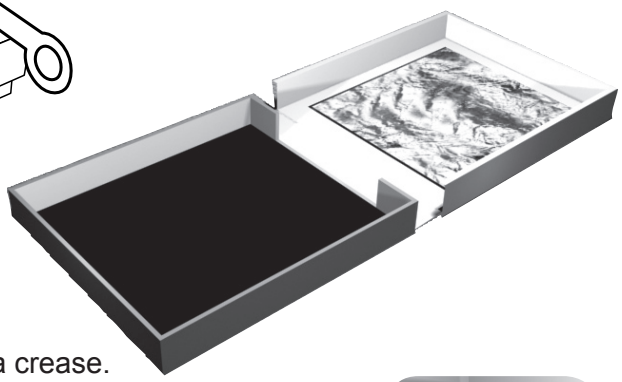


What to Do

1. Draw a line about 2" in from the edges of the box.

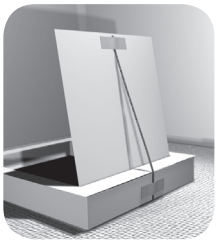






2. Cut along the line. *Don't cut along the top edge where the hinge of the box is!*

3. Gently fold the flap back along the uncut edge to form a crease.



4. Put a piece of aluminum foil on the inside of the flap, and fold the edges around the backside of the flap. Use the shinier side of the foil facing up, and try to smooth the foil. Tape the foil edges on the back of the flap with masking tape, keeping the tape from showing on the front side of the flap. This foil will reflect sunlight into the box.

5. Open the box and put a piece of black paper in the bottom of the box to help absorb the sun's heat.

6. Close the box, roll up some newspaper, and fit it around the inside edges of the box top. This is the insulation to hold the sun's heat. It should be 1" to 1.5" thick. Use tape to hold it in place.

7. Cut a square of Oven Bag plastic that's about 1/2" bigger on all sides than the flap opening in the box top. Tape to the inside of the box top with clear tape. Tape one side, *then pull the plastic tight* and tape the other three sides. It must be airtight!