

Solar Oven

Category	Activities
Badge	Cooking
Advancement	Conservation
Time to allocate (mins)	20
Outcome	Build and use a solar to make smores
Resources	<ul style="list-style-type: none">• Cardboard Pizza Box/Cake Box/Muffin box• Black paper• Plastic wrap (unless your box already has a plastic "window" insert)• Tin foil• Tape• Glue• Knife/Scissors• Marie biscuits• Marshmallows• Chocolate
Instructions	<p>Step 1: Carefully use your knife to cut a square opening in the lid of the pizza box, staying within an inch or so of the border. Don't cut the hinged side of the box—keep that side together, and fold back the flap. This is not necessary if your box already has a plastic window or cutout in the lid (some cake boxes or muffin boxes have this).</p> <p>Step 2: Cut the foil to the correct size so that it fits on the flap that you've folded back. Using the glue, attach the foil to the flap, keeping the shiny side out and making sure the foil is smooth. If your box does not have the flap however, you may want to add some foil as a reflective surface that can be positioned to direct the solar energy into the box.</p> <p>Step 3: Put another piece of foil in the bottom and sides of the box, with the shiny side up. Cover the foil with the black paper on the base of the box only (not the sides). This is the "heating element."</p> <p>Step 4: Next, take the plastic wrap and stretch it over the open area (where the flap you cut used to be). Tape it well around the edges so that the wrap is sealed. This step is unnecessary if your box already has a plastic window in the lid.</p> <p>Step 5: You're almost ready to cook! Now you simply decide what you'd like to make—anything from English muffin pizzas to s'mores—and put it on a small foil tray, on top of the black paper. Close the plastic lid, being sure the seal is as tight as you can get it, with the box tabs tucked in.</p> <p>Step 6: Use a stick (i.e., long ruler or paint stirrer) to prop open the flap of your oven. The sunlight will reflect on the foil, plastic, and your black paper, cooking your food.</p> <p>Step 7: Check your food often by looking through the plastic wrap. Try not to open the lid too much because every time you do, heat escapes.</p> <p>Step 8: When your food is done, open up the box and enjoy!</p>

Entry written by Sharon Venn of 1st Randburg