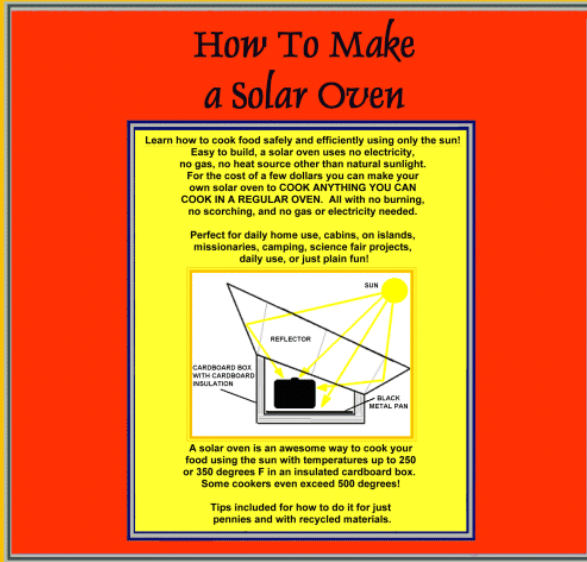


How to Make a Solar Oven

By Sharon Buysdens

A How-To Book by Sharon Cornet



Step by Step Instructions - Cook your food using the sun!

Covers BOX cookers, PANEL cookers, PARABOLIC cookers, "Pizza-box" cookers, "Pringles-can" cookers, the simple Bernard cooker, etc. WITH PICTURES! Also includes details on thermometers, swivel pivots, sun timers (timing dowel) for easier cooking, recipes, tips for cooking, what kind of pots/pans to use and avoid, and more!

For the cost of few dollars you can make your own solar oven to
COOK ANYTHING YOU CAN COOK IN A REGULAR OVEN.
All with no burning, no scorching, and no gas or electricity needed.

Formerly Sharon Cornet

CONTENTS

What Is A Solar Oven?	1
How Does It Work?	2
THE BOX.....	2
OPENINGS FOR FOOD ACCESS.....	3
BOX MATERIALS	4
INSIDE THE COOKER	4
What Can You Cook In It?.....	9
TIPS FOR COOKING	9
What Types Of Solar Ovens Exist?.....	14
Direct gain “BOX” cookers.....	14
Panel cookers	14
Parabolic cookers	15
The Easy, Cheap, and Efficient Solar Oven.....	17
Other Design Ideas	22
Recipe Ideas	27
Solar Oven Web Resources	30

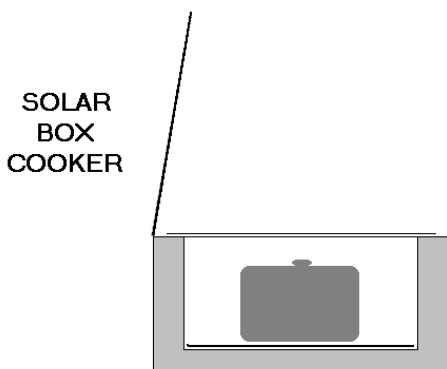
How to Make a Solar Oven

What Is A Solar Oven?

A solar oven, also known as a solar cooker (*I will use these terms “oven” and “cooker” throughout this section, interchangeably*), is usually a box-shaped container. This box serves as the “oven” and has a piece of glass on top to allow the sun to shine in and heat it up. Temperatures inside the oven usually range between 180 degrees to 275 degrees Fahrenheit but can go over 500 degrees F in some manufactured models.

Anything you can cook in a regular gas or electric oven can be made in a solar oven, but since it works like a slow cooker (heating the food at lower temperatures) it takes a little longer, so the food can take approximately 1 ½ to 2 times as long to cook, depending on the solar oven and the sun’s intensity. Please note that the low temperature setting on most electric crock-pots is only at about 160-170 degrees F so if you compare cooking in a solar oven similar to cooking in a crock-pot then you already have the idea!

People who hate to cook or don’t know how to cook well such as kids or many bachelors, or even people who don’t have time to cook a lot such as campers who prefer to hike all day and come back to a hot meal (without having to cook it once they get back) love to use solar ovens because of the ease and simplicity and convenience they provide. You can leave the food to cook in the sun and not worry about scorching or burning it, which is a real plus.



How Does It Work?

How a solar oven works is simple. Basically the sun's energy enters through the top of the oven (insulated box) via a piece of horizontally or diagonally placed glass (or other clear item such as plastic wrap (worst choice), Plexiglas (thicker is better), or oven bags (cheap and can withstand higher temperatures) and heats up the inside of the oven hot enough to cook the food efficiently.

THE BOX

The design of the box is very important. It should always be well insulated but never using items such as fiberglass insulation, Styrofoam or other foam products, colored newspaper, or duct tape as these items can give off toxic fumes when heated up to the higher temperatures you'll find in a solar oven. Better items to use for insulation would be black and white newspaper (excellent) or standard

cardboard (also excellent). Both are recycled materials. If you are in doubt of a particular insulating item you could possibly use then it is always best to be safe than sorry and eliminate any chances for a potential health hazard. For an exterior insulation some people have used papercrete (cement mixed with cellulose) that has been cured and they have found it to be a very lightweight but strong and economical alternative to straight paper or cardboard, especially since it dries back out after a rain and gets rock-hard again. *For more information on papercrete and its many uses – such as for home building – please see our gallery page at www.sunstar-solutions.com*

The box is usually about 10” high in the back and can be that high in the front as well (the “front” being the side that faces the sun... usually facing south if you live in the northern hemisphere of the world) but tends to work more efficiently if the front side is lower, so as not to create shadowing inside the box. Some boxes are longer on the front and back and some are simply square. Other cookers I’ve seen have been octagonal, round, or a host of other shapes. For simplicity in this book we will be designing a rectangular box, however it will have a lower front side to allow more sunlight into the box.

OPENINGS FOR FOOD ACCESS

Some people add a removable lid on top so the food can be set inside or taken out (use hot pads as the pots/pans and food can burn you, as well as the heat which escapes out the top of the box when it is opened!) or checked on. Usually you won’t want to check the food too often as it does not require stirring (hardly ever anyway), plus opening the oven causes all the heat to escape and it will have to reheat up all over again once you put the lid back on. Sometimes the glass or plastic is attached to the removable lid, and

sometimes it is placed underneath a lid that just covers the edges of the cooker.

If you have an old toaster oven on hand that doesn't work anymore then the unit can be altered or the door itself removed and used on the backside of the solar oven to add or remove food (a side-opening door tends to lose heat less quickly than one that opens on top).

BOX MATERIALS

Some people make their solar ovens out of wood, metal, or other materials depending on their design criteria. For a permanent oven you may wish to use something other than cardboard or newspaper as these can wear down or get soggy if a sudden rain comes up, which can destroy your entire cooker. On the other hand, cookers made out of recycled paper or cardboard are usually lighter, sometimes collapsible, and easier to transport if you like to take your cooker with you on outings, school functions, or trips. The box-shaped cookers are handy in that you can store some of your non-refrigerated food items inside, put the lid on, and take the whole thing with you in the back of the vehicle when you go camping, etc. Make sure to stay away from materials that may outgas or give off poisonous toxic fumes such as plastics. Plastics may also degrade and get brittle in the sun.

INSIDE THE COOKER

On the sides of the solar cooker's interior you'll need to add a reflective surface in order to bounce and reflect the sunlight around inside the box for better efficiency in cooking. This is usually done by gluing aluminum foil or placing a lightweight reflective surface such as aluminum

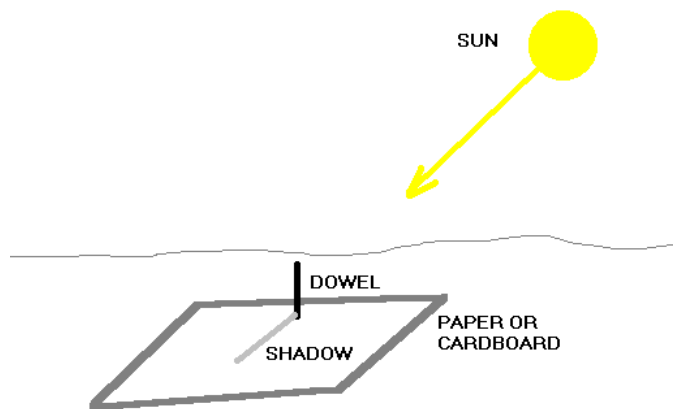
sheeting on the inside walls of the oven. Such aluminum sheets can usually be gotten for free, or for mere pennies, from a printer (such as for newspapers) who tend to have tons of these sheets on hand as scrap or waste. One side will have printing on it, and the other side you can use as your clean reflective surface.

On the bottom of the cooker you'll also want to place aluminum foil or sheeting and on top of that you'll want to put a cookie sheet or flat metal pan painted black (use BBQ black spray paint and then let the oven "run" for a day to burn off the paint fumes before using the oven to cook food the first time – do not cook on painted surfaces!) or else a seasoned or well used – or even a piece of – cast iron griddle in the bottom of the box. This serves as your heating plate for which you will place your pots and pans full of food on. Cast iron takes a little longer to absorb the heat from the sun, thereby making your initial preheating time a bit longer in your oven, but once going it retains the heat better in case you have to open the oven to check the food, or if the sun goes behind the clouds for brief periods. Cast iron also cooks more evenly than aluminum or cookie sheets do. I would like to recommend the cast iron as the primary bottom, and a long griddle available at many stores or cooking shops and an old one you already use is even better because it will already be black. Black cast iron (or any cast iron for that matter) will not, and should not have to be painted at all.

A black or dark colored marble bottom (marble is great for directly baking pizzas on, especially if you have a well designed oven that gets very hot) will also do nicely, but both help this process. I have seen some people use old swivel chairs as their pivot. It would be recommended to have a way to stop the random pivoting of the chair or

turntable (i.e. “Lazy Susan”) in case a gusty day ensues as the wind may turn your cooker away from the sun, instead of towards it.

Another option for timing the cooking of your food (especially when you are out camping or don't have a watch or clock available to check the time) is an hourly **timing dowel**. If you place a small piece of a skinny wooden dowel into the top of the cooker (vertically) then the dowel will cast a shadow.

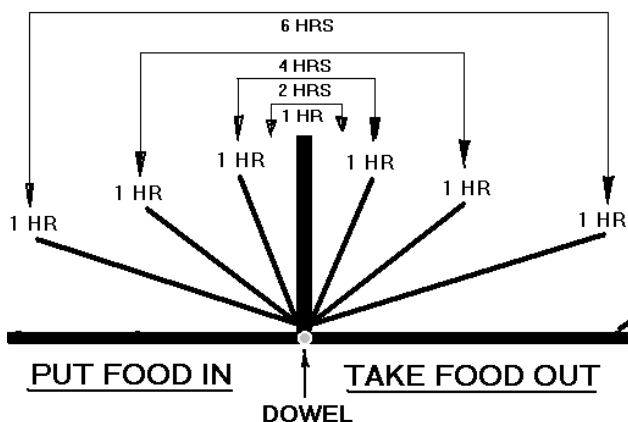


Hourly timing dowel causing a shadow

The shadow produced, not unlike a sundial, will move as the sun tracks through the sky. You can mark, on a piece of paper or cardboard where the shadow is at noon, and then where it falls in one hour, two hours, three and four hours,

etc. Once done then lines drawn the same distance in the other direction (the other side of the dowel) will also show the hourly progression.

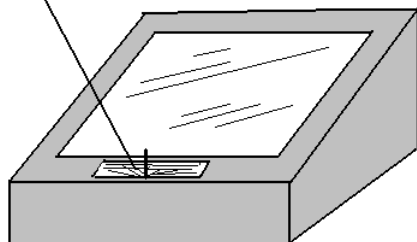
Sample sun timer (not to scale)



Although this is a seemingly simplistic or archaic way of timing the cooking of your food, it is extremely easy and very worthwhile in the long run. Just make sure to mount your timing dowel (also called a “timer” or “sun timer”) to a permanent place on the front top edge of your cooker so it will not move. Getting it laminated against the weather might also help make it last longer.

How to Make a Solar Oven

DOWEL ROD & GUIDE HERE



Placing your dowel timer on the solar oven

What Can You Cook In It?

What you can cook or bake in a solar cooker is almost unlimited. The general rule of thumb is that you can cook in a solar oven whatever you can cook in a regular oven, except that it will just take a little bit longer. Usually the length of cooking time is about 1 ½ to 2 times that of a standard oven.

You will need to preheat your oven by setting it out in the sun about 30 minutes before you start cooking. Rice dishes and soups or stews do particularly well.

TIPS FOR COOKING

POTS/PANS:

Make sure to use black pots with tight fitting lids. Black is best because the dark color absorbs more of the heat. Thick metal pots/pans take a little longer to heat up than do thinner metal pots and pans. Many people prefer to use corning ware or Pyrex except that you may wish to place aluminum foil (although this may bounce some of the sunlight back off the pot, lengthening cooking time) or some other solid but flexible material on the outside of the lids to keep the sunlight off the food so it doesn't bleach out the color of the food. Vegetables tend to fade quickly when they are cooked in the sun if not covered with something opaque.

VEGETABLES:

The nice thing about solar cookers is that it's almost like steaming your vegetables, as they need very little or no water in the pot. Too much water creates extra mass in the pot which has to heat up, and then can leach out the nutrients in the vegetables, much like boiling does. It's better to cook the vegetables themselves with the heat the oven provides rather than take extra time heating water. Place harder to cook items (carrots, cut potatoes, parsnips, cabbage, cauliflower, etc.) in the oven first, and add vegetables which are more easily cooked later on (such as greens, asparagus, green peas, etc.).

POTATOES:

You can bake potatoes by placing them in foil, or putting them directly on the bottom of the oven, however large potatoes tend to take quite a while to cook. It might be better to either bake smaller sized potatoes or else cut the potatoes into wedges or smaller pieces and stick them in a pot with a tiny bit of water so they'll cook faster. This goes for all kinds of brown, white, red, purple potatoes, or orange and yellow sweet potatoes/yams.

MEATS:

All kinds of meats do well in solar ovens. You can roast a chicken or pieces of chicken for a casserole and I have even seen some people do their entire Thanksgiving turkey in a solar oven but it takes most of the day to do so. Roasts,

stews, chili, and other meats you would let sit in a crock pot or just simply bake in your regular oven will do nicely in your solar cooker. Hot dogs only take about 15 minutes to heat up and no water is needed. You can even warm the buns for the hotdogs by setting the entire bun package in the cooker for about 5 minutes.

BREADS:

Breads and rolls can be heated, warmed, or even baked as well although the breads tend to not brown as nicely in lower temperatures as they would in a regular oven. Bread seems to do best in 1 lb dark coffee cans, or even a Dutch Oven (although the latter takes much longer to heat up). Brushing egg whites over the top of the dough before baking may help to brown it some. Keep the reflector off for raising the bread, and put it on for baking. For pizzas and pies, bake the crust first. Cornbread does well in a solar oven.

BEANS:

Dry beans may be cooked but we recommend soaking them overnight first and putting warm/hot water in the beans the next morning before placing it in the cooker to give it an extra boost and reduce cooking time by an hour or two. It may still take several hours or all day to finish cooking the beans as they are probably the hardest thing to cook in a solar oven; however, they are also one of the most popular items to cook. We went to a lady's house one time, at noon, and she had cooked split pea soup that morning for us in her solar cooker... it was delicious!

MISCELLANEOUS:

Cookies (a favorite) and other desserts such as cinnamon rolls do quite well as do melting cheddar cheese on nachos, etc. Cakes and brownies do fairly well although cakes can sometimes come out a bit crumbly if the recipe isn't adequate for slow cooking... but they still taste wonderful!

DRYING FOODS:

Like other vegetables you will need to keep the sun off of them in order to dry them. It is important when drying foods to make sure that you have a good book on hand, or already have some knowledge about how to dry food. You will want to keep the lid/glass of the cooker cracked open so that the majority of the heat and moisture can escape, otherwise you will find that the food you place on your racks will COOK instead of dry out. You definitely don't want this to happen. Depending on the amount of sunlight, moisture conditions, how hot your cooker gets, etc. will determine how much you need to crack or open the lid/glass.

SOLAR WATER PASTEURIZATION:

In many developing countries solar cookers are not only used to replace expensive gas/propane/butane, electric (if available), or scrounging for firewood so they can cook their food, but they are also used to pasteurize water. If you are in an area where the quality of the water is in doubt then you may be able to pasteurize your water in your solar cooker. Here is how it is done.

Take a CLEAR jar, jug, or glass and place the water in it. Set the container in the preheated solar cooker in full sun. Make sure the water is not shaded as the Ultraviolet (UV) in the sunlight will kill off 99.9% of all bacteria and micro-organisms within 90 minutes (in FULL sunlight, otherwise leave it up to a few hours), plus once the temperature reaches 140 to 212 degrees F then anything else left will automatically be killed off.

This works great for water which is high in coliform bacteria (a main cause of cholera and diarrhea in developing countries) or which has micro-organisms such as giardia (commonly found in water) or cryptosporidium (often found in lakes or ponds). It is important to note, however, that pasteurization of water does NOT remove solids such as sand, sediment, rust, nor does it remove minerals, arsenic, volatiles (like gasoline, kerosene, pesticides/herbicides), chemicals, or heavy metals. You would need a solar water distiller for that, or you could rig one up (if you have the know-how) to use the cooker as a water heater/pre-heater prior to distillation. *To learn how to make a solar water distiller see that section on this subject.*

What Types Of Solar Ovens Exist?

There are many types and forms and styles of solar ovens out there in the world but most of them fall under three main types – direct gain, panel, or parabolic cookers.

Direct gain “BOX” cookers

These are the most simple and easy to make, and often the cheapest style of oven to create. This involves the insulated box and a piece of glass to cover the cooker (allowing the heat in and keeping it from escaping). The direct gain style cooker is the one we'll be teaching you how to make below. You can place food in these simple cookers and set it “ahead” of the sun, so that the sunlight can “catch up” and then pass it later on (much like the sun timer shows above) so there will be even cooking and less shading throughout the day. These are the types which campers like to use, or kids, or bachelors as they don't burn the food, nor do they require much attention in order to cook the food. Temperatures are more constant and lower in these types of cookers, ranging from 160-325 degrees.

Panel cookers

Panel cookers are basically a direct gain cooker with added Mylar, aluminum, or other shiny panels all around the outside so as to reflect added sunlight into the cooker,

therefore decreasing cooking time by increasing temperature by around 25-75 degrees on average.

Parabolic cookers

Parabolic/paraboloid cookers are more complex in their design and use fixed and perfectly angled mirrors or other shiny (Mylar or aluminum) rounded (concave) surfaces/reflectors all aimed towards a central focus point so as to cook the food in an area that now has concentrated sunlight. These **MUST** be turned on a swivel pivot **OFTEN** (every few minutes) in order to keep up with the movement of the sun and keep the heat on the food/pot, otherwise the temperature will drop and the oven will not work efficiently. Parabolic type ovens cook the food at much higher temperatures and also cook it much faster than traditional cookers. Temperatures usually range from 200-500+ degrees.

There are some very simple **hybrid ovens** that combine the direct gain system along with parabolic ideas in order to make the cooker more efficient.

Richard Wareham of Sunstove Organization has developed just such a solar cooker (www.sungravity.com). He has placed thousands of these cookers all over in developing countries to aid the people in cooking without costly fuel.

Mr. Wareham had some NMSU students build some of these, using the old printing aluminum sheets I mentioned near the beginning of this book, so they could be distributed by the El Paso Solar Energy Association (www.epsea.org) to people in Colonias (poor rural communities along the US/Mexico border where health issues abound) during their

Solar Water Distillation Projects.

As Project Manager of these projects I put in many hours of teaching people how to use both the stills as well as the cookers. The southwest area of the country is now spotted with many of these hybrid type solar ovens, which have been a help to many.

The Sunstove style of cooker uses the direct gain type of system with parabolic sides inside the cooker so as to reflect the light toward the pot/pan in the middle. All of the sides, therefore, are angled gently but not focused to a specific point. This allows the sunlight to be distributed evenly within the cooker instead of shining on one small section. Also, the front is lower and the back is higher, making the glass mounted at a tilt, for optimum solar gain and no shadowing.



**Solar Cooker built by NMSU students
(cookies are baking inside, waiting to be eaten
by Jeremiah Eby-Martin, Earth Day 2001**

The Easy, Cheap, and Efficient Solar Oven

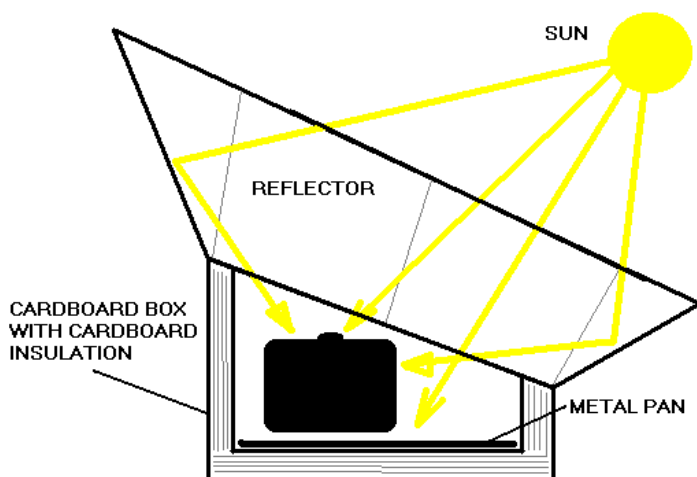
This oven is the one we've been leading up to. It is both simple and inexpensive to make and yet works very efficiently; with a one-piece aluminum foiled reflector set on top it becomes a panel type solar cooker.

It utilizes cardboard pieces for the insulation, all glued together, so the walls of this cooker are still lightweight although stronger than one with newspaper as the insulation material. The front (south facing) wall is short and the back wall is higher so it has less shadowing inside the box.

The pan inside can be a cookie sheet painted black, an aluminum sheet painted black, or even aluminum foil painted black (use black poster paint as it doesn't give off fumes, or else use black BBQ spray paint and let the cooker "run" for a day before cooking in it to burn off any fumes). In this case I prefer to use a well seasoned or used cast iron griddle as they are easy to clean, cook evenly, and hold the heat well, even though it takes a little longer to preheat the oven. Try to find your pan or griddle first and then get a box (or make a box) to fit it so there won't be wasted space and to make sure your pan will fit.

Important Note: *Make sure the pan/griddle fits inside the box with about 2 ¼" to spare all the way around.* Plexiglas (thick) or an oversized oven cooking bag can be used as the glass. I tend to shy away from actual window glass in cookers because it is easy to break glass and cause an accident. For the same price Plexiglas is much better.

How to Make a Solar Oven



Side view of the panel solar cooker

STEP 1:

Once you have your griddle and right-sized box (width and length 2" wider/longer than your pan) then cut (if necessary) the back of the box down to 10" in height and the front side down to 6" in height.

STEP 2:

Take white school glue mixed half and half with water and set it aside. Use a 2" wide (or so) cheap paint brush to paint on the glue on the bottom of the inside of the box.

STEP 3:

Press down (over the glued bottom) a piece of cardboard equal to the size of the bottom of the box. Make sure there are no gaps. The piece, or pieces of cardboard should fit just right to evenly cover the entire bottom. Paint more glue on this upper piece of cardboard and then place a new piece(s) of cardboard on top again. Keep doing this until the entire bottom of the box has about 2" of cardboard on it.

STEP 4:

Repeat these same steps for gluing the cardboard to the front, back, and sides so they are all 2" thick as well. Make sure the angle of the top of each side is shaped right to hold on the "glass"... shave or trim this off, if necessary, with a utility knife to the shape shown in the picture above. The "glass" should fit flat on the upper surface of the cooker.

STEP 5:

Put glue on bottom and sides and stick on heavy-duty aluminum foil all around. Repeating this step several layers thick is best, but not necessary. Make sure aluminum covers the top edges of the cardboard insulation/walls as well (where the "glass" will lay onto). Finish off all inner edges with strips of aluminum tape (available at hardware stores for several dollars) to seal the corners and give added strength, if needed.

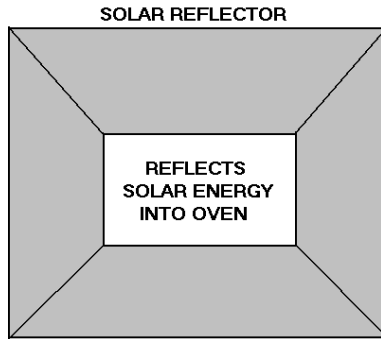
STEP 6:

Place griddle/pan inside the cooker and put Plexiglas on top. A lid may be made to fit over the glass to help hold it down and reduce leakage of inside air to the outside.

Option: Instead of Plexiglas you may also create a rectangular-shaped “ring” made out of 3 pieces of glued cardboard the same width and length as the top part of the walls of the oven. Place the oven cooking bag around this, gluing it or taping it down with aluminum tape. You now have a double-paned “glass” which can withstand high temperatures, is food-grade, and will help hold in extra heat due to the air space in between the sheets of the bag. Don’t forget to make a lid as stated above on Step 6.

STEP 7:

Take several pieces of cardboard (one for each side of the cooker) and make a reflector, taped together with aluminum tape and then aluminum foil glued onto the inner surface of it to act as a one-piece (foldable and collapsible) reflector for the cooker. The top-back piece should be taller/higher than the lower-front piece. The reflector should be made to sit on top of the oven lid, or can be attached to the lid itself.



STEP 8:

Place a pot of food on the griddle/pan in your cooker, place the “glass” on, then the lid and reflector and set in the sun. Use a sun timer and an oven thermometer if you like. Once the food is done... enjoy!

Other Design Ideas

Two simple cookers which younger kids love to make for science fairs are the pizza box cooker, and the Pringles can hot dog cooker.

For the **pizza box cooker** the lid is raised, foil attached all over the inside (including the lid), black paint or black construction paper placed inside on the bottom, and saran wrap over the top (to serve as glass). This will warm a pizza but not “cook” it per se, but it’s a lot of fun to do and to teach the basic principles of solar oven cooking.



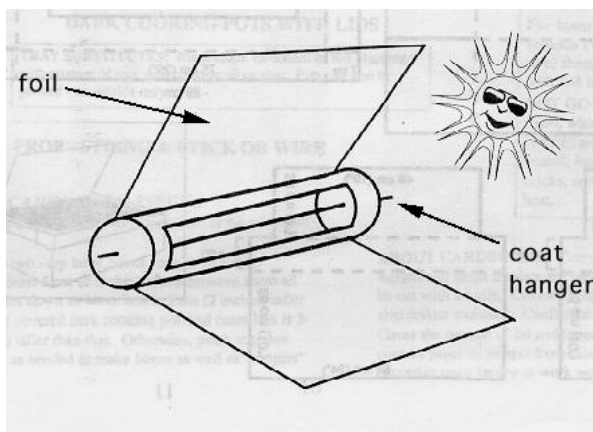
**Pizza box cooker
made by
children at Earth
Day in Deming,
NM 2001**

The **Pringles can hot dog cooker** is also very simple. Half of the side is cut out (keep the ends intact). Then a coat

hanger straightened and burned clean over a flame and stuck through small holes made at both ends of the can (bottom and through the lid).

Plastic wrap over the open side of the can, and a larger L-shaped reflector made out of cardboard and aluminum foil finish it off. Put the hot dog on the rod, place the can in the bend of the L-shaped reflector, face the sun and it will heat the hot dog in about 15 minutes.

These cookers do not actually cook the food either as they are very small units with no insulation but it will warm the hot dog enough to eat. These are also very popular among kids and science fairs. It is important not to keep the food in these little make-shift cookers too long as the temperatures are not high enough to “cook” or kill bacteria growth.



Pringles can solar hot dog cooker

Source: <http://p2.utep.edu/watts/projects/cook.cfm>

Probably the most SIMPLE & PORTABLE solar cooker known is the **Bernard Solar Panel Cooker** which utilizes these few materials in which to make it:

Cardboard

scissors

ice pick

glue

aluminum foil

a large jar with lid

a large oven cooking bag (turkey sized)

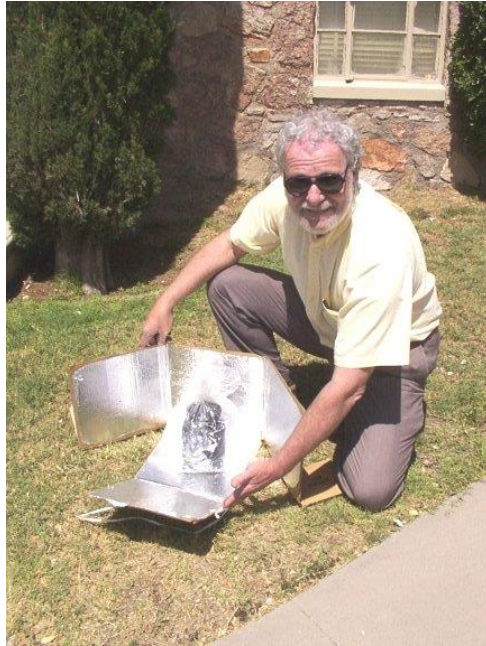
black poster paint

a twist tie

Cut the cardboard into a T shape (as shown in the picture below), glue the foil to it and create the necessary bends in the cardboard so it will reflect as needed. Use the ice pick to poke a hole in the lid (this serves as a steam vent so pressure doesn't build up in the jar), paint the OUTSIDE (only) of the jar black and let dry.

Put food to be cooked inside jar, put on the vented lid and stick the whole thing inside the oven cooking bag (blow up the bag with air and twist tie it shut). Set jar in bag on the reflector. Tabs may be kept on the upright side panels of the reflector so rocks or something heavy can weight it down so the wind doesn't blow it down.

Aim it all towards the sun, keep watch on it, turning it towards the sun if necessary and soon your food will be ready to eat!



**Steve Cook at the Energy Center of the
University of Texas at El Paso with
“Bernard solar panel cooker”**

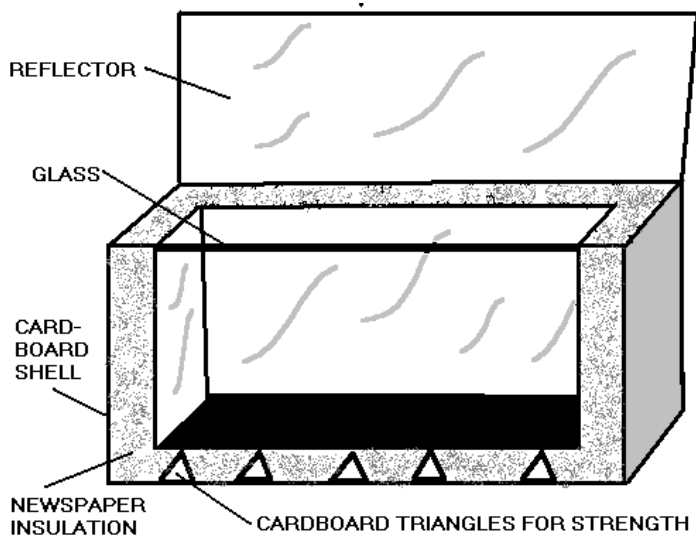
One of the most commonly made direct gain solar cookers (with one foiled lid flap as the reflector) is the box-within-a-box type of oven. The outer box should not be more than 10” high all around. Several long triangles made out of cardboard (taped together so they keep their shape) are spaced evenly in the bottom for strength.

Wadded up black & white newspaper (small pieces wadded tightly is best) are then placed in the bottom between the triangles. Center the second inner box on top of the triangles/insulation and then fill in the sides all around between the inner and outer boxes with more newspaper (never use colored newspaper as it gives off toxic fumes).

How to Make a Solar Oven

Mix white school glue $\frac{1}{2}$ and $\frac{1}{2}$ with water and paint it on the inside walls, pressing aluminum foil flat against it. Cover the top with more cardboard and tape it in place. A foiled lid may also be made to serve as a reflector. Place a black painted cookie sheet in the bottom, plastic wrap or glass or Plexiglas can be used horizontally to allow the sunlight in and trap the heat. You are now ready to cook!

Cut-away view of "Solar Box Cooker"



Recipe Ideas

Here are some tried and true recipes for using in your solar oven. Thanks to Peggy Chinkes for these!

Baked 3-Bean Casserole for Sun Oven

3 cans 16 ounce ea. of assorted beans, such as kidney, pinto, and pork & beans with salty packing liquid rinsed off. For one of the three, I like the pintos with jalapeños.

1/2 cup chopped onion

1-1/3 cup brown sugar

1-1/3 cup catsup

1 Tb. dry mustard powder

2 Tb. cider vinegar

Mix together in oven proof dish and bake until bubbly
and onions are done.

Split Pea Soup à la Sun Oven

1 16 ounce bag of split peas
1 cup chopped carrots
1 cup chopped onions
Red pepper flakes and/or Tabasco to taste

Combine all of above ingredients in oven-proof casserole with oven proof lid. Peas will soak up water while cooking. Keep covering them with water. Cook in sun oven for several hours or until desired degree of thickness. Keep stirring to mix veggies. It's often better when cooked a second day. When it tastes done, puree further by mashing contents with a hand-held potato masher or puree with a food processor. Chunks of cooked ham, salami, or Bacos may be added. Refrigerate leftover amount and add milk or more water to serve after it has congealed overnight. Makes 6 servings.

Sun Oven Baked Rice

1 cup natural grain rice
1-1/2 cups of water or bouillon
8 X 8 inch Corning or Pyrex dish with oven
proof lid

Mix rice with water, cover, and bake in oven at
250

degrees for approx. 1 or 1-1/2 hrs. When
done, fluff up with spatula. This method will
not boil over as is often the case with rice
cooked on a stove top. For
Spanish rice variation, add ½ cup salsa to 1
cup of
water or bouillon.

Serves 2.

Solar Oven Web Resources

I have no connection to these websites, but they appear to have some good information:

Sun Ovens Int., Inc.
<http://www.sunoven.com/>

Funnel cooker
<http://solarcooking.org/plans/funnel.htm>

“Cookit” foldable cooker
<http://www.solarcooking.wikia.com/wiki/Cookit>

Backwoods Home
<http://www.backwoodshome.com/articles/radabaugh30.htm>

Parabolic oven
<http://www.instructables.com/id/Parabolic-solar-oven/>

Enjoy cooking with the sun!!!

The expanded 2nd version of this book (96 pages) is titled:

DIY: How to Make a Solar Oven

It is available for \$10 on www.amazon.com or my website www.sunstar-solutions.com

This free version (v1), including many other titles on different solar and other subjects, can also be downloaded at my website at no cost.

This is a free book by Sharon Buydens

PLEASE PASS IT ON

FREE TO OTHERS!