

Did You Know?...

Solar Cooking = Carbon Free Cooking

If you have an adventurous streak you might want to explore solar cooking. During this period of pandemic caution we are avoiding eating out which likely means more cooking at home. For some of us it also means a lot more time at home to do things. For us, solar cookers might be viewed as a toy or novelty; but in other parts of the world they are very important for cooking without having to burn scarce wood. If you want to do more than sun tea it will require some investment in time and/or money to obtain a cooker. They all use a simple technology of concentrating sunlight by reflection into a smaller area. Buying a solar cooker online can cost anywhere from \$50 - \$500 but it can also be made at home. In addition to learning a new way of cooking you will also be able to cook without CO2 emissions.

The solar cookers currently in use can be divided into four types:

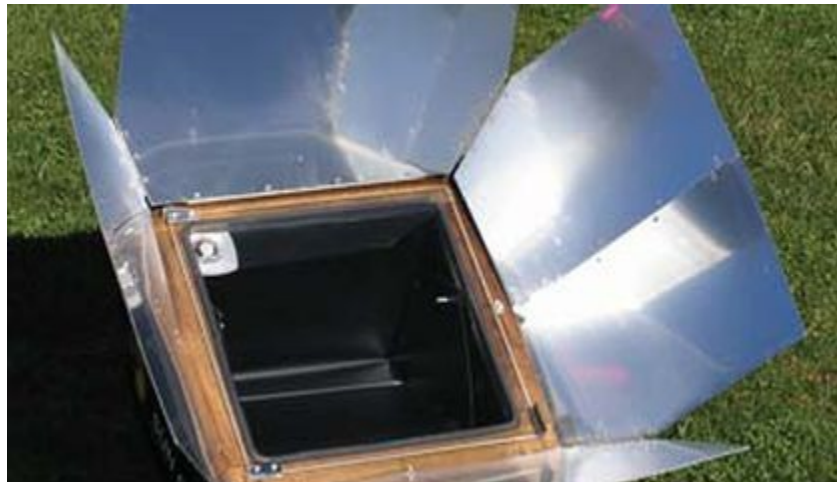
1. Parabolic or Dish Solar Cooker – These are large dish shaped reflectors that have a focal point where the pan is located. They cook very hot like a gas burner. They are big and bulky and are priced in the \$100-\$500 range.



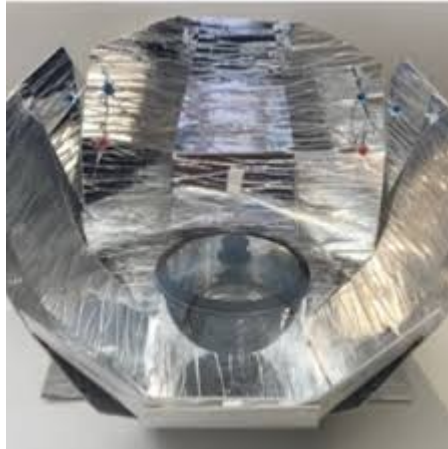
2. Vacuum Tube Solar Cooker - Is a horizontal glass tube with a long slender metal tray that slides inside of it. The long tray limits the kinds of food you can cook but it cooks fast and is fairly portable. Apparently there are some cheap Chinese copies to avoid. This type comes in various sizes and range in price from \$150 - \$500.



3. Box Oven Solar Cooker – This is an insulated box with a glass top and has reflectors concentrating the sunlight through the glass. This is very much like cooking in an oven. Depending on the design it may cook at a similar temperature as a regular oven or may be more like a slow cooker. This type ranges in price from \$200 - \$500



4. Panel Solar Cooker – Fold up and light weight fair weather box ovens with no insulation but in summer can cook much the same as a box oven. This type ranges in price from \$50 - \$200.



Here is a good link to a video describing each of these types of cookers:

<https://www.youtube.com/watch?v=UsFrXjMA01M>

As an inexpensive way to try solar cooking from my research I recommend the Haines 2.0 Solar Cooker with Dutch Oven which costs around \$100 online. I bought this one for my son and his husband to try solar cooking in Atlanta.

Do-It-yourself

If you are a DIY person then it is not too difficult to make any of these except maybe the vacuum tube solar cooker. There are plenty of tutorials on the web and YouTube. Below is a link to a video of a DIY solar oven that I used as a jumping off point. What I liked about this oven is its simple design and large size to accommodate many kinds of foods. I made two at a cost of about \$250 in materials so about \$125 each. I already had all the wood but had to buy glass, aluminum mirrors with plastic composite backing, aluminum sheet for interior base. I find this oven runs at about 250F in full sun which allows me to slow cook most anything. I am thinking of adding a couple of side mirrors to try to push it up to 300F. Here is the YouTube video I worked from:

<https://www.youtube.com/watch?v=mzoL-Rjig6A>

My DIY build was slightly more elaborate with legs and a front mirror. The mirrors fold nicely to protect the glass when not in use. If I were to build another one I think I would make the back open instead of having to raise the whole glass enclosure to access the oven. But I am pleased with how it cooks and have even made bread in it.

Here is a photo of my solar cooker making cookies.



Here making Mac & Cheese



Have fun with the sun.

Feel free to contact me if you have any comments or questions.

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