

Alternative Cooking Demonstration

By Kevin and Sue Card

Rocket Stove:

Strengths:

1. Burns small pieces of wood efficiently
2. Can be used with wood or briquettes
3. Can be used with a wok, grill or heavy pan.
4. Easy and economical to build <http://sustainablog.org/2011/09/how-to-build-a-rocket-stove/>
5. Many ready-made models available www.stovetec.net, www.rocketstove.org

Weaknesses:

1. When using a wood fire the pot/wok turns black from soot deposits.
2. The ash needs to be emptied frequently.
3. Fuel needs to be added frequently

Box Oven:

Strengths:

1. Inexpensive and easy to build <http://foodstoragemadeeasy.net/fsme/docs/boxoven.pdf>
2. Bakes breads/cookies/cakes beautifully
3. Requires fewer briquettes (1/2 the amount as a Dutch oven) ; 10 briquettes = 350°
4. Lightweight

Weaknesses:

1. Rather fragile
2. Bulky
3. There are a lot of parts to it

Volcano Stove:

Strengths:

1. Uses a variety of fuel sources—wood, propane or briquettes
2. Can be used with a Dutch oven, wok, grill or heavy pan.
3. The "lid" makes it more efficient and enables baking.
4. A lever can control the temperature.
5. More efficient than a regular Dutch oven.
6. <http://www.volcanogrills.com/dutch-oven;>

Weaknesses:

1. More expensive than other cooking systems

Butane stove:

Strengths:

1. Can be used indoors. (With ventilation)
2. Moderately priced
3. Very easy to use
4. Temperature easily adjusted
5. Fuel is quite safe to store
6. Small, lightweight
7. Comes in a case

Weaknesses:

1. Only one type of fuel can be used.
2. A can of butane lasts between 2-3 hours
3. Does not burn well at high altitudes and will not burn below freezing.

Sun Oven:

Strengths:

1. Fuel is free!
2. Clean energy—no smoke
3. Bakes very well
4. <http://www.sunoven.com/>
5. <http://www.solarcooker-at-cantinawest.com/buildingasolarcooker.html>

Weaknesses:

1. Dependent upon sunny weather
2. It needs to be watched and turned toward the sun
3. Rather bulky
4. Expensive

Parabolic Dish:

Strengths:

1. Fuel is free
2. Clean energy-no smoke
3. Generates high temperatures (750 degrees) quickly—no pre heating
4. Cooks quickly (6 times faster than charcoal or grill)
5. <https://www.oneearthdesigns.com>

Weaknesses

1. Dependent upon sunny weather
2. It needs to be watched and turned toward the sun
3. Rather bulky
4. Expensive

Heat-retention or “hay box”, Wonder Box, Ice Box Cookera:

Strengths:

1. Minimizes fuel used—especially foods that require a long cook time such as beans and rice.
2. No cost or low cost if you make your own
3. Made with items you have on hand
4. <http://solarcooking.org/heat-retention/>

Weaknesses:

1. Does not have its own fuel source (Food needs to be heated up with another source)
2. It takes more time than traditional methods

Thermo Cooker:

Strengths:

1. Well insulated
2. Not as bulky
3. Efficient
4. Minimizes fuel use
5. <http://www.saratogajacks.com>

Weaknesses:

1. Cost
2. You have to plan ahead. It takes more time.

Other helpful information: youtube video link

<http://www.youtube.com/watch?v=2L9wZZUF0Vc>

The number of briquettes needed:

Temperature	8" Oven		10" Oven		12" Oven		14" Oven		16" Oven	
Degrees F	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom	Top	Bottom
300	10	4	12	6	14	8	16	10	18	12
325	11	5	13	7	15	9	17	11	19	13
350	12	6	14	8	16	10	18	12	20	14
375	13	7	15	9	17	11	19	13	21	15

The average number of sunny days in Utah:

Days with clear skies in Salt Lake City, Utah			
	Sunny	Partly Sunny	Total Days With Sun
January	6	6	12
February	5	7	12
March	7	8	15
April	7	9	16
May	9	10	19
June	14	10	24
July	17	10	27
August	16	11	27
September	16	8	24
October	14	8	22
November	8	7	15
December	6	6	12
Annual	125	101	226

This chart indicates that you can use a solar oven 226 out of 365 days a year. 62% of the year.