

Do More with Solar Cooking

While energy is essential to modern society, most primary sources are unsustainable

<http://css.umich.edu/sites/default/files/U.S. Energy System Factsheet CSS03 -11 e2018.pdf>

Types of solar energy

- Photovoltaic: makes electricity
- Thermal: transfer of heat, through convection and conduction

Types of solar cooking

- Box: thermal heat through conduction and convection
- Parabolic: focus energy in one spot, can achieve high temperature
- Reflector: panel surrounds pot

Why solar?

- Cheap (if you make them)
- Sustainable
- Convenient

How do box cookers cook?

- Sun's energy enters passes through the glass and, strikes the black surface which absorbs heat through conduction. That surface heats up air (convection) which transfers the heat to the pot and its contents

Box cooker basics

- Use metal pots or dark glass.
- Need lid or covering; can use aluminum foil i.e., baked potatoes.
- Don't need to stir.
- Think crock pot: low temperature and long time.
- Need to have temperatures above 170° F for an hour to kill bacteria; think pasteurizing milk.
- Turn box cooker periodically to orient to sun.
- **ALWAYS** use potholders!
- **Do not leave cardboard cookers out in the rain!**

Know More Solarwise

General References

Center for Sustainable Systems. U.S. Energy System.

[http://css.umich.edu/sites/default/files/U.S. Energy System Factsheet CSS03-11_e2018.pdf](http://css.umich.edu/sites/default/files/U.S._Energy_System_Factsheet_CSS03-11_e2018.pdf)

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Solar References

Environmental Protection Agency. Planning a home solar electric system <https://www.energy.gov/energysaver/planning-home-solar-electric-system>

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Solar Cooking References

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Edible Communities. How to Make a Solar Oven.

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<https://energyresearch.ucf.edu/education/k-12/resources/solar-cookers/#:~:text=There%20are%20three%20basic%20types,parabolic%20reflector%20and%20panel%20cookers.>

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