

Umbrella Parabolic Cooker

Materials

- large umbrella (min 120 cm diameter)
- mylar (from emergency 'space' blanket)
- aluminum duct tape
- craft paper
- spray glue or white glue
- scissors
- hacksaw
- holder for pot--metal plant stand, small tripod, etc

Procedure

1. Open umbrella. Using the craft paper make a template of one of the triangular sections of the inside of the umbrella.
2. Using the template you made, trace enough sections onto the mylar to cover the inside of your umbrella. Cut out the sections.
3. Working outdoors or in a very well ventilated area, affix one section at a time to the inside of the umbrella with the spray glue (spraying the umbrella and then placing the mylar pieces). Press out as many bubbles and creases as possible (a rubber roller or a plastic card--credit card, driver's license, etc--can be helpful). If you are using white glue, thin the glue until it spreads easily with a paint brush.
4. Tape around the outside edges with aluminum tape.
5. Tape any loose or uncovered seams between sections with aluminum tape.
6. To trim the stick and handle at the focal point for the pot stand, take the umbrella outside on a sunny day. Place the umbrella on the ground and point the stick directly at the sun. Mark the spot on the handle where the reflection of the sun's rays is the greatest.
7. Cut the stick 2" below your mark (shorter). This will enable you to place your pot in the focal point of the umbrella.
8. When cooking, your cooker will sit on the ground facing the Sun. You may need to place something behind your cooker to keep it pointed towards the Sun.
9. You want the bottom of your pot to be positioned in the focal point (2" above the top of your stick), so the pot stand or tripod will need to sit on top of part of the cooker. Make small cuts with the scissors so the legs can go through the cooker and sit firmly on the ground below.

How to cook using your parabolic cooker

1. Mix or prepare the food to be put in the cooker according to the recipe.

2. Position the cooker so the face of the umbrella is pointing directly at the Sun. Position your pot stand so the pot will be in the focal point. **Remember, whatever is in the focal point of your cooker will get extremely hot!** It is also recommended that you wear sunglasses while working with a parabolic cooker.
3. Place your food in your cooking pot or pan; open frying pans may be used with parabolic cookers, if they are accurately placed in the focal point.
4. Place the cooking pan on the pot stand. Be sure to watch your food—it can burn with a parabolic cooker.
5. For extended cooking, move the cooker periodically (every 10 minutes or so) to follow the Sun as it moves across the sky.